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Hearing on Alternatives to Land Disposal of Hazardous Waste, Vol. I

Assembly Committee on Consumer Protection and Toxic Materials

ASSEMBLY COMMITTEE ON CONSUMER PROTECTION AND TOXIC MATERIALS

HEARING ON

ALTERNATIVES TO LAND DISPOSAL OF HAZARDOUS WASTE

VOLUME I

Sacramento, California
February 2, 1982

MEMBERS

Assemblywoman Sally Tanner, Chairwoman
Assemblyman Peter Chacon
Assemblyman Dave Elder
Assemblyman Richard Katz
Assemblyman Ernest Konnyu
Assemblyman Don Sebastiani
Assemblyman Byron Sher
Assemblywoman Cathie Wright

STAFF

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(TRANSCRIPT OF TESTIMONY)

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82-12-396

TABLE OF CONTENTS

APPENDIX

HEARING ON ALTERNATIVES TO LAND DISPOSAL OF HAZARDOUS WASTE

Tuesday, February 2, 1982, 1:30 p.m.
Room 447, State Capitol

CHAIRWOMAN SALLY TANNER: The small microphone is what we have to speak into because they're recording. These microphones are not hooked up to the recorder, so when you make any comments, try to speak into the microphone. What we're going to do is I asked the Sergeants if they would set up a larger room. We will begin our hearings here and when the larger room is set up, then they'll call us and we can move. I think that way everyone will have a seat. Thanks for being here.

I've called today's special hearing to review the Governor's Office of Appropriate Technology's Report on Alternatives to the Land Disposal of Hazardous Waste, and to obtain a clear understanding of the administration's proposed program based on that report. There are some concerns regarding the administration's program. It is my intent to provide a forum for all interested parties to air their concerns in the hope of providing the impetus for everyone involved to begin communicating directly with one another.

I believe it is this committee's responsibility to guide hazardous waste management to insure a safe tomorrow because that tomorrow belongs to all of us. To achieve this objective, we must develop responsible programs that are amenable to the industries involved, to the public, and to all levels of government. Today's hearing is an effort to begin the honest and open discussions that

are so vital for the development of feasible and safe hazardous waste management programs. We will hear testimony from a broad spectrum of interested parties. The list of witnesses is quite extensive. I must emphasize the need for everyone to keep their testimony short and concise. If you have a long statement to make, I would appreciate it if you would give us a brief statement and then submit the written statement to the committee, and then it will appear in the report. Our first witness will be Peter Weiner who is a Special Assistant for Toxic Substance Control from the Governor's Office. Peter.

MR. PETER WEINER: Madam Chairwoman and members of the committee. Thank you for the opportunity today to discuss California's deliberate and responsible steps to reduce the pollution of our land and consequent pollution of our air and water and neighborhoods through the disposal of toxic wastes. I've provided you with a copy of my written testimony and although I will stick to it pretty much because it's short, I intend to summarize it as much as I can.

In California we've long been a model for hazardous waste control programs for the entire nation. And recent bills passed by this committee and by the Legislature will help assure continuity of that leadership position. But a great deal remains to be done in this state as well as elsewhere. Other states and countries have sometimes surpassed us here in California by using safer disposal technologies and encouraging waste reduction at the source. Two years ago cognizant of the need to keep abreast of this fast changing technology, Governor Brown proposed and the Legislature approved of a study conducted by the Office of

Appropriate Technology to determine the availability and practicality of new waste reduction treatment and disposal technologies that could reduce our dependence on land polluting disposal methods. You'll hear in detail about the OAT report today, both from OAT and from private sector witnesses. I'm happy to say the OAT report has really achieved a national significance because of its careful blend of technological and economic analysis and its fairly exhaustive compendium of alternative technologies. I've attached for your consideration letters from the Governors of North Carolina, Michigan, Nevada, and Hawaii which offer glowing support for the report and its conclusions. And as the chief of EPA's Hazardous Waste Implementation Branch, Mr. William Sandro wrote, "Just as the federal government and the rest of the states have followed California's lead in the use of the hazardous waste manifest, I pray that they will follow your lead in phasing out the land disposal of untreated toxic wastes, so that we can see an end to all the misery and expense that this foul practice is causing." We think we're justifiably proud, therefore, of the OAT report as a responsible first step toward the development of a hazardous waste regulatory system which is protective and cost effective for society as a whole, not only for the immediate profit picture of an individual firm. You will hear today from several witnesses who have concerns about the report and its proposed implementation program. I'd like to very briefly highlight some of the concerns and some resulting questions and comments that I have. First, I think you will hear overall that the technology assessment made by OAT is accurate. Throughout a lengthy consultant report, industry concedes with a fee quibbles that OAT did

a good job in assessing the available waste treatment and disposal technologies. Number two, some witnesses will question whether a reduction of landfill disposal is an appropriate goal. Some claim that there is no need to reduce landfill disposal, that we have to have a body count, some proof positive of human health damage in each site or a year's long risk assessment study. They claim that we finally now have secure landfills - why change. Well first, we do not plan to ban all landfills. There is no one currently in the employ of the state to my knowledge who plans that or wants that. Landfills are appropriate for certain types of waste. Second, the scientists and engineers have assured us before. They assured us that Springfellow was set on bedrock only to find that there were boulders with lots of holes. They assured us that Calabassas was safe for earthquake purposes, only to reassess their position. At sites throughout the country, there have been problems as we learn more. They also were wrong in telling us that TCE was too volatile to stay in our water or that DBCP couldn't sterilize the men who manufactured it. This is not to blame science or technology. The fact is that we keep learning. Certainly it is better to be safe now than to tell our children we're sorry later. The only way to do that with landfills, and this is a consensus, I think, of most of industry as well as government, is to reduce landfull disposal. The third question, is the timing practical? Well, to paraphrase a popular ad - "We will ban no waste before its time." As other witnesses will testify in detail, we believe the immediate goals of this implementation program are practical and achievable. Now given any increase in the cost to the disposer, quite apart from any reduction in cost to

local government, health, and emergency response personnel, or the public. You do need regulatory consistency to achieve these goals. There has to be some regulatory push or people simply won't spend that money. That's why we have this kind of system. Now all too often industry witnesses before EPA, OSHA, and other regulatory agencies have pleaded impossibility or radically higher costs for achieving some goals like this, only to find that the costs are small after their engineers have applied technical ingenuity and innovation to the problem. As one Circuit Court of Appeal said after a challenge to one of these regulations, the judge said, "Industry simply must have more faith in its own technological abilities for the future. If they find after a few years that this is impossible, come back to us." But we've found in the past the technology, especially in these areas is changing far faster than we could have expected. The workshops in February, the 16th and 19th in Los Angeles and the Bay Area, are designed to continue the dialogue with industry that has already begun on this issue. And we will not take steps which would only result in more midnight dumping. A fourth concern is, will it cost money? Of course, but not much even under some of the unusual assumptions made by some people in industry. And certainly the costs are minimal as a marginal increase in total disposal costs. More importantly and most appropriate for us to consider is that there will be a net decrease in costs to society due to decreases in pollution, adverse human health effects, and raw materials depletion. As to fees, our disposal fees in California are now only 10 to 15 percent of what they are in much of the rest of the country. California is in no danger of exacerbating problems by having high

fees. Finally, a concern was expressed in this long, consultant report that in some way we were asking industry itself to bear the burden of implementing some of these technological breakthroughs. Of course, we know that government doesn't have the institutional competence nor should it to go into every industry and every firm and tell them what to do. We try to strive for performance standards so that each firm will be responsible for its own practices in order (1) to internalize costs where they belong in the product instead of in later costs to society; and (2) to achieve industry flexibility to meet these objectives in the most cost effective manner. To conclude, one of the industry representatives on the OAT advisory committee, the president of Romic Chemical Company, Mr. Schneider, has commented that the OAT report should not be seen as monolithic, but as a living thought, a living thing. We agree. We hope that companies like 3M will be able to describe our actions as they describe the report in the letter I've attached to this testimony as "extremely thorough" and "pragmatic." We certainly look forward to your active consideration of the report and the need for responsible reduction of landfill waste disposal in California. Thank you very much.

CHAIRWOMAN TANNER: Thank you very much. Just a moment, Mr. Weiner, Mrs. Wright has a question.

ASSEMBLYWOMAN WRIGHT: Peter, don't you feel that the Governor in his Executive Order was just a little premature without everything on line? I guess where I'm coming from is that I feel that the OAT report is just that. It's a report, but it isn't a program - it's not a program. It's not a program lined out with time phases as to what can be accomplished and I think that the

Executive Order by the Governor has put government in an adversary role with the industry. And what I would feel is a lessening of that time schedule. I think what should have been done was to have a program where you have everything phased in. And then at a point in time where you felt that...well to be quite frank, that industry was dragging their feet, then that would be a time to come down with an Executive Order or a time frame when you're going to do it now.

MR. WEINER: The first steps that are called for in the report, I believe that Kent Stoddard will describe them in more detail, are quite minimal really and we think they're very practical and achievable within that time frame and the OAT witnesses will be describing that further. But to respond more fully to your questions, I was struck the other day that an industry representative who I won't quote without his permission - but he represents a trade association that's very affected by this, said, "You know, the report was very good and the Executive Order wasn't so bad. It was the press release that was really the problem." And I think that to answer the question in terms of substance that we are going to be responsible. The time schedule that we are on has already been delayed in a couple of respects. I think in other respects, it won't have to be. But we are definitely committed to a dialogue that's responsible and appropriate. There is simply no use in taking action that amounts to sticking your head in the sand. We don't think that's going to happen and that's why we're having these dialogues and these workshops.

ASSEMBLYWOMAN WRIGHT: I guess where I'm coming from is I would not take any technology without the proper incentives and

without the feasibility as to the cost that's involved and the time that it's going to take it to come on line. Right now I can't think of anything that you could phase in and have going and operating by the first of January 1983 - and I guess that's what my concern was.

MR. WEINER: I think I'm going to allow the OAT witnesses to answer this in more detail. I'd just like to say that most of the time-lines in there are not January '83. Most of them are far later. And in terms of the ones that are there for January '83, I think you'll find from the testimony today that we think it's really going to happen, which is unusual.

CHAIRWOMAN TANNER: Thank you very much. I think it's important and I think that's why it's very important that we're having these hearings so that we can hear about the OAT report, so that we can hear industry and those other people who are interested parties respond and perhaps get an idea where we're going from here. Certainly it gives everyone an opportunity to communicate their concerns.

MR. WEINER: If it turns out that we've been naive, that we're wrong- then we're going to correct it.

CHAIRWOMAN TANNER: Thank you very much. I think it would be best now to hear from the people from the Office of Appropriate Technology. It would be Robert Judd, the Director; Kent Stoddard, Manager; and Gary Davis, Waste Management Specialist. Now let me say this, that whoever is going to open can sit there and within 15 minutes Room 4202 will be ready. And then we can break up here and go to 4202 and have better facilities. This is Robert Judd, and I did forget. Would you identify yourself for

the records?

MR. ROBERT JUDD: Thank you, my name is Bob Judd. I'm Director of the Office of Appropriate Technology for the State of California. And I also sit as a member of the Advisory Committee on Hazardous Waste for the Office of Technology Assessment in the U.S. Congress. I appreciate the opportunity to appear here to discuss a program.

CHAIRWOMAN TANNER: Could you sort of review the advisory committee on how it's made up.

MR. JUDD: I do have that in my comments. Thanks very much. The program which we have developed over the past 18 months is one which has received statewide and even national attention, as you note from the interest on the part of many groups desiring to speak before you today. Much of the attention has come in the form of support and praise, particularly from citizens and technical specialists who have had to live with the results of chemical waste management, and public officials who have had to respond to the cleanup programs and more effective management strategies. Much attention also has come from some segments of the chemical waste generating industries who feel the state may be moving too quickly in its efforts to reduce their dependence on land disposal sites for highly toxic wastes. We appreciate the opportunity to explain our program, to correct misconceptions, and to hear comments from those who will be most affected by it. Let me give you some background on how we become involved in the toxic waste disposal issue and how we developed the report. In 1980 our program was initiated in response to concerns raised both by the Governor and others about the serious and long-term risks to public health

and the environment from chemical waste mismanagement. At that time, the Governor directed the Department of Health Services and our office to investigate the technical and economic feasibility of using alternative technologies. This effort was supported by the Legislature during the budget process. Maybe more specific, we set out to address the question on how to reduce the exposure of Californians to the highly toxic waste, carciomogens and the mutagens that deny many of the people in California the right to a full life. This is what we mean when we say high priority. It doesn't deal with all of the hazardous waste stream, but only that top level of it that is the highest risk. I'll give you a specific example. During the time that we're likely to be in this hearing from 1:30 until 6:00, if the figures from manifests and RCRA applications are right, 700 tons of highly toxic hazardous waste will be generated in California. That's the rate of production of hazardous waste in the state right now. From the outset of our study, we felt that it was extremely important to work with representatives of both the chemical waste generating industry and the waste processing industry. We've consistently sought...

CHAIRWOMAN TANNER: Just a moment. Mr. Elder.

ASSEMBLYMAN ELDER: Did you say 700 tons?

MR. JUDD: Yes, sir.

ASSEMBLYMAN ELDER: Per year?

MR. JUDD: Yes, sir. No, no, 700 tons per half day, 500,000 tons per year. We've consistently sought participation and attempted to avoid a battleground mentality in dealing with those whose opinions and experiences may differ from our own. We hope not to place blame on industry for past practices, but

rather to develop a plan of action so that we could avoid becoming victims of complacency and shortsightedness. Engineering, public health, and policy experts from waste generating processing industries were invited to participate, the universities, and private research organizations were invited. I would like to share with you a few excerpts from some of the statements we heard about a year and a half ago at hearings that directed our work. From the Vice President of IT Corporation, "The chemical engineering technology that produces chemical waste by-products is now being utilized to safely and permanently process, detoxify and destroy this hazardous waste. It is a solution to America's hazardous waste problem that is available today. The technology, financing, and management expertise are available from private industry and are ready to be put into action. From a senior official at Dow Chemical Corporation, "Thought must be given to economic incentives which will foster these alternative technologies, as well as consideration given to disincentives which will discourage wholesale dumping of hazardous waste into available Class I sites. I would say that together we should figure out which all needs to be done and then let's work together to create the incentives needed to do the job. From the Western Area Manager of Chemical Waste Management, Incorporated, "Our company strongly recommends that the state establish or impose supplemental regulations for selective groups of hazardous wastes. In particular, Chemical Waste Management believes that land disposal without pretreatment should be prohibited for those hazardous and extremely hazardous materials which present inordinately high risks relative to either air pollution and/or public health and safety.

Such waste materials falling within this high risk category include solvents, cyanide containing waste, high concentrated acids, and others. The pretreatment before land disposal is not mandated by the state industry investment and pretreatment facilities would be economically imprudent. With this advice from the industry experts, as well as that we've received from others testifying at the hearings we've said about our program, our next step was to establish an advisory committee to assist us in assessing the feasibility of alternative waste management technologies. The Governor sent a letter to the presidents of the California Chemical Industry Council and the California Chemical Waste Processor's Association, requesting their participation. These organizations later recommended industry representatives to participate on their advisory committee. Additional representation was sought from university researchers and major environmental organizations. Three meetings of the advisory committee were held during which we received extensive input on the types of waste which represented the greatest threat. The waste relator characterized as high priority.

CHAIRWOMAN TANNER: This was last year?

MR. JUDD: Yes, that's correct. We analyzed the technical and economic feasibility of advance treatment, recycling and incineration technologies. And finally out of that, we developed a set of recommendations to guide the administration in minimizing land disposal. The advisory committee reviewed each stage of our work and provided input and guidance in the development of our final report. In October the Governor endorsed the report and signed an executive order directing the Department of Health Services to use

existing authority to implement the key provisions. Today we are pursuing a comprehensive waste management strategy with a few significant high points. Phasing out the land disposal of highly toxic and persistent wastes over a two and a half year period beginning in January 1983. Increasing the cost of land disposal to discourage this method of disposal. Encouraging investments in alternative waste management technologies by providing financial incentives and streamlining the permit process for new facilities. Developing new criteria to help guide siting, promoting demonstration projects. This is the most comprehensive management program assembled in any state. It is possibly the only program in the country that responds fully and responsibly to the public's demand, with better systems of hazardous waste management than we've seen in the past.

CHAIRWOMAN TANNER: I have a question. On the streamlining of the permit process, do you have plans on the streamlining of the permit process?

MR. JUDD: We do, indeed. Would you like to respond to that question?

MR. KENT STODDARD: I will cover that in my testimony, if you like.

CHAIRWOMAN TANNER: All right.

MR. JUDD: Public opinion surveys continue to identify the chemical industry and its practices as posing some risks to health, safety, and the environment. And the survey in the Bay Area last September, 65 percent of those questioned thought a poor job was being done in disposing of toxic waste chemicals. Nine out of ten people expressed serious concern about the use of toxic

chemicals. Your committee is well aware of the seriousness of the crisis facing the state having considered a large number of bills. Some of the most important bills have originated from members of this committee. The program that we've developed over the past year complements much of the legislation you've considered and which in some cases has been enacted. It seems to me that the issue is quite clear and reality is unavoidable. One choice we face is how direct a path will be taken to reach the solution upon which we all agree. We can substitute endless research for responsiveness and responsible action, or we can proceed rapidly and carefully on the evidence at hand. The State Department of Health Services is working with OAT, and the State Water Resources Control Board, the Air Resources Board, the Solid Waste Management Board, and regional and local agencies to implement this new program. It is a cooperative outreach effort on our part. The critical factor in the success of this program will be the degree to which the chemical industry can work cooperatively with citizens' groups and state and local officials to implement the solutions. We can't abide either from the environmentalist or from the industry or from government the old worn out arguments or defensiveness that characterized so much of the environmental debate in the past. We have actively sought and received cooperation to date and involvement in a number of projects we think are closer to our goal. Achieving the goals will be challenging, however, and at times it will be frustrating. Yet we must be successful in carrying through on our commitment to safely manage hazardous waste. We strongly believe that the program we have developed will accomplish the objectives we have set forth - to protect public health and the

environment, to be sensitive to competitive pressures faced by California's waste generating industries, and to ensure that California has the treatment capacity it requires to maintain economic progress in the 1980s and beyond.

CHAIRWOMAN TANNER: Thank you very much. A question, Mrs. Wright.

ASSEMBLYWOMAN WRIGHT: I have two questions. My first question is, this Advisory Committee that you had. Did each one of the members of this committee read the report and make changes in it or certify as to its contents? They were totally in agreement with it?

MR. JUDD: Each member of the steering committee, the Advisory Committee, was given numerous reviews with all of the elements and were allowed word by word, sentence by sentence review authority on the report. Even to the extent at the end when we were printing the document to ask if any of the people on the Advisory Committee felt uncomfortable with the findings or recommendations, they could have their name deleted from the Advisory Committee list and none chose to do so.

ASSEMBLYWOMAN WRIGHT: And the other question I have for you, you mentioned 700 tons in a half day. Are you saying four hours?

MR. JUDD: Twelve hours.

ASSEMBLYWOMAN WRIGHT: You're talking about twelve hours.

MR. JUDD: The total was for illustration. There are 5,000 tons of highly toxic waste generated in a year. I divided that by the number of days, and then again it has to give us some sense of what a workday basis might provide.

ASSEMBLYWOMAN WRIGHT: Now taking into consideration that tonnage, are you also taking a count on those areas where you have found they have been illegally dumping, then discover the methods have been changing and putting in these bills. You're cleaning up one spot, and you're taking it some place else now. Does that include --?

MR. JUDD: No, that is not included. These are based on our estimates.

CHAIRWOMAN TANNER: We're not getting a response. We can't hear.

MR. JUDD: Would you want to repeat that.

ASSEMBLYWOMAN WRIGHT: No, I don't think we can hear in the back of the room.

MR. JUDD: His number I don't believe included any estimation of what the magnitude is to clean up from other abandoned dump sites. So this would be materials that are actually coming out of industrial processes today in California. Those numbers show up either on manifest forms for the material that are off-site disposal facilities or they show up on Part A permit application under RCRA that estimate the total volume of waste that is produced each year by all facilities that treat, store, or dispose of facilities on site.

ASSEMBLYWOMAN WRIGHT: And how much emphasis are you putting on anything or people in the State of California that you're really talking about hazardous materials. I intend to tell you I have one problem because there has to be a definition, and I'm talking about a division wherein people will understand what we are really talking about. Because I think you're talking about

eliminating all toxic and hazardous materials. You're talking about changing lifestyles and I don't know whether the people in the State of California are prepared for that. And I'll give you an example. I don't think there is a woman here who would want to see all the beauty shops closed down, and yet we're talking about toxic materials.

CHAIRMAN TANNER: No, I'll tell you what we are going to do. The other room is ready. Before we break to go to the other room, Assemblyman Sher wants to read a letter and make a comment and have that included in the testimony.

ASSEMBLYMAN SHER: Thank you, Madam Chairwoman. I ask you to recognize me because I have to go into the Joint Legislative Audit Committee and Mr. Konnyu has already departed for it. This is a letter that was addressed to Chairperson Sally Tanner, the Assembly Subcommittee on Consumer Affairs and Toxic Materials, and which I received a copy. It's fr-m an organization called the Peninsula Industrial Business Association. Now the officers and the directors of that organization include people from companies such as Reichhold Chemicals, Dupont, United Airlines, FMC Corporation, Chevron, Johnson & Johnson, ITT, Lockheed Missiles and Space, IBM, etc. And the letter which I would like to have as part of the record reads as follows. It's quite brief. We request that this letter be included in any public meeting or public hearings to discuss the Governor's Office of Appropriate Technology Assessment or Alternatives to the Land Disposal of Hazardous Waste. The Peninsula Industry and Business Association is a group of Bay Area companies which are concerned with the various aspects of regulation and legislation. PIBA operates through five committees,

one of which is the Industrial Waste Management Committee, which is charged with the responsibility of updating the association on emerging industrial waste recycling technology as well as other environmental matters. The association is composed of over 180 companies which specialize in the electronic and other high technology manufacturing. The Industrial Waste Management Committee represents PIBA's interests before the numerous governmental agencies involved in pending environmental legislation. The committee has been gathering technical data supplied by association members and governmental agencies to be presented in a report to the interagency task forces, Toxic Waste Assessment Program on February 19, 1982, in Berkeley, California - one of the workshops that is considering the OAT Report. With this in mind, it is our recommendation that your committee defer any action on this matter to supply your committee with a copy of this upcoming report. Technology for the successful treatment of hazardous waste is currently being utilized within the United States and other countries. We feel that it is just a matter of time and money until California meets and eventually leads the way in the technology of chemical waste treatment." And it is signed Jeffrey Conrad, Chairperson of the Recycling Subcommittee of PIBA's Hazardous Management Committee.

I would simply say in comment, Madam Chairperson, that I agree that this hearing should be for informational purposes only. Its purposes are known to the representatives to clarify what this program is all about. And it's my understanding, you know, that no particular action is contemplated on the part of the committee at this time and that we will receive the results of these workshops

on this very report that we are considering at the appropriate time.

CHAIRWOMAN TANNER: And finally, of course, this committee is the committee that will probably develop legislation that is necessary, if legislation is necessary. So it's very important that this committee have a hearing and not have volumes of reports to read from another workshop. And I feel that's why it was very necessary for our committee which is the legislative committee to hear what everyone has to say, and then if there is legislation necessary we will...

ASSEMBLYMAN SHER: I totally agree with that, but to anticipate that any proposed legislation would be down the road.

CHAIRWOMAN TANNER: I would think so.

ASSEMBLYMAN SHER: Before the workshops have an opportunity to consider the report and reach their own conclusions. I have copies of this I'll leave with the secretary.

CHAIRWOMAN TANNER: Thank you. Why don't we break up and go down to 4202, and then we can...

ASSEMBLYWOMAN WRIGHT: I would like to ask you as chairman of this committee if it is possible that if any criteria or any guidelines come out of these hearings that are being held, do we see them first before they are implemented by the Department of Health?

CHAIRWOMAN TANNER: I would think that we certainly should be invited to attend the workshops.

ASSEMBLYWOMAN WRIGHT: But I think you understand what I'm talking about.

CHAIRWOMAN TANNER: Yes.

...Thank you. What I intend to do is to ask Kent Stoddard and Gary Davis to stay here during the testimony in case there are any questions from anyone or any of the witnesses. Then you can respond. I think that might be handy and might be much more convenient for all of us. All right, Kent. Mrs. Wright, did you have any further questions for Mr. Judd?

ASSEMBLYWOMAN WRIGHT: No, that was it and then just my statement in regards to the material.

CHAIRWOMAN TANNER: Our next witness then will be Kent Stoddard, the Manager of the Office of Appropriate Technology. Kent, would you identify yourself.

MR. KENT STODDARD: Madam Chair and Members of the Committee. My name is Kent Stoddard. I direct the toxic waste program for the Office of Appropriate Technology. You'll receive a rather lengthy statement that we prepared for today and I will try to just summarize some of the major points that we've tried to cover in our written testimony. We're going to talk about some of the major elements of our program, the report, and then some of the recommendations, and then ultimately how the administration has chosen to follow up on many of those recommendations. I appreciate the opportunity to explain just how we did reach some rather startling conclusions about hazardous waste management in the State of California.

Specifically over the last year and a half, we've found that we know very little about the hazardous wastes that are produced in California. And we also know very little about the long-term effects and the long-term security of land disposal sites. We found that 75 percent of all wastes that are currently disposed

of in Class I and Class II-1 landfills, could in fact be recycled and reduced at the source, treated or incinerated. We also found that most of the alternative waste management capacity that's needed in California could in fact be sited, permitted, and constructed much faster before we could ever make significant progress in siting a new land disposal facility in California. Before launching into a description of just what our report involves and how it was put together, I want to provide a real brief perspective if I could on land disposal - our experience with land disposal throughout the country. This really provided the backdrop for our report and I think is important for any discussion of our findings.

Since the discoveries at Love Canal in 1978, there has been a growing body of knowledge and evidence that land disposal is inadequate for the safe long-term containment of hazardous wastes. Last year the U.S. EPA summarized the scientific consensus on land disposal. In their February 5th regulations, they indicated that the regulations of hazardous waste land disposal must proceed from the assumption that migration of hazardous wastes and their constituents from a land disposal facility will inevitably occur - migration will occur. Since EPA regulations came out, there have been a lot of other concerns that have been expressed about the long-term security of land disposal sites - groups such as the Attorney General's Office in the State of New York, the Attorney General's Office for the State of Illinois, the Kansas Engineering Society, Princeton University, Texas A&M University, all have raised serious questions about the long-term security of land disposal. A study of Princeton showed that four new landfills built to state-of-the-art standards began to leak

organic contaminants after one to two years.

CHAIRWOMAN TANNER: At this point, isn't there an absolute need for landfill? If all of the other technology were used, isn't there a waste even after incineration or any other method of disposing?

MR. STODDARD: There definitely is. And I don't even suggest we're trying to get rid of land disposals. What we are trying to point out is that there are some risks inherent in land disposal which require a great deal more caution than we've exercised in the past.

A couple of other major findings. Texas A&M Univeristy found that certain organic compounds permeate clay liners a thousand times faster than they originally thought based on earlier studies with water. The Kansas Engineering Society as I indicated has taken an official position that there should be no land disposal of hazardous wastes. So the other states including Illinois, Arkansas, Massachusetts, Missouri, Kentucky, have all enacted legislation that will prohibit land disposal and require the use of alternative technologies. I offer this only as a perspective about what we are pursuing in California at this time. I also want to mention that the long-term security of the land disposal facility is dependent upon many, many factors. Every landfill will not become a "Love Canal," will not become another Stringfellow Quarry. However, we are confronted with an enormous amount of evidence that suggests that there are serious problems with many of our land disposal facilities. And I believe that most scientists today would agree that to do anything other - to consider landfills anything other than our last resort for the disposal of highly

toxic and persistent materials is extremely unwise. So what does this mean for California? We know for sure that California is one of the largest waste producing states in the country. Up until a few weeks ago, we estimated that five million tons of hazardous wastes are produced each year. Now it looks more like 16 to 18 million tons of hazardous wastes are actually produced. This is based on new information that we've just received from the EPA. The source of that information are the RCRA Part A applications, which the University of California, Davis has been compiling on our behalf. I'd like to point out that we...

CHAIRWOMAN TANNER: Mr. Elder has a question.

ASSEMBLYMAN ELDER: Both members earlier suggested that highly toxic waste is 500,000 tons per year. Was that the number that was...

MR. STODDARD: That is the amount of highly toxic or high priority wastes as I recall that currently go to off-site land disposal facilities.

ASSEMBLYMAN ELDER: In the 15 to 16 million tons that you're talking about, does that include oily waste water?

MR. STODDARD: It does. That's all the hazardous wastes produced within the state.

ASSEMBLYMAN ELDER: Would you say half of the 15 to 16 million tons in California is oily waste water?

MR. STODDARD: I don't have numbers in front of me. I'd hesitate to guess. It's one of the largest waste streams.

MR. GARY DAVIS: If you'll look in your briefing package, there is a black binder which you all have gotten. No, that's not the one. There is another chart similar to that which shows

the types of waste that are disposed of. And we only have a really good breakdown on the off-site waste, the ones that go off-site. And probably a good 25 to 30 percent of this are oil and water kinds of waste, oily waste that comes from the...

ASSEMBLYMAN ELDER: Does that count the reinjected oily waste water that goes into oil wells for tertiary, secondary recovery?

MR. DAVIS: Not for the off-site. Some of the people that reported to EPA under RCRA regulations may have misconstrued what the regulations were really about, and reported some of those wastes that were being reinjected. Now we're not sure about that for the on-site.

ASSEMBLYMAN ELDER: Well, let me talk in terms of the half million tons. How much are you talking about? The Port of Long Beach annually handles 50 million tons of cargo annually. So 500,000 tons would represent one percent of the tonnage simply going through the Port of Long Beach, which essentially represents maybe 35 percent of the total tonnage of the state. So we can get some order of magnitude in terms of what we're talking about. That would be equivalent to like five tankers of toxic material, 500,000 tons, if each one held 100,000 tons. So you get some idea of the volume that we're talking about here in terms of some graphic, specific sizes and shapes.

MR. DAVIS: Good.

CHAIRWOMAN TANNER: Isn't that a fairly conservative estimate really?

MR. STODDARD: Which estimate is that?

CHAIRWOMAN TANNER: The amount that you're talking about.

MR. STODDARD: It's been very difficult to nail this down. I think California has one of the better data bases of anywhere in the country. Yet, there are still imperfections in ours. And I think over the next few months, we'll get better information, but right now there is a great deal of uncertainty about just what kind of volume we're really talking about.

MR. DAVIS: Especially on-site disposal.

CHAIRWOMAN TANNER: Yes. A question from Mrs. Wright.

ASSEMBLYWOMAN WRIGHT: On these high priority lists, do you have any kind of a breakdown as to which is really toxic as compared to those materials that would not be considered toxic for the average individual?

MR. STODDARD: If I could continue with my testimony, that's one of the major points that I would like to cover.

ASSEMBLYWOMAN WRIGHT: Okay, because what I see for instance...so we have pesticides but you don't have any percentages or tonnage as to the total amount of pesticides, nor do you say what they are because there are pesticides that are very toxic and yet there are pesticides that people use every day in their gardening process they can pick off the shelf. And I guess that what I'm really trying to get at is not to have people become so upset when you talk about pesticides if there are categories of pesticides.

MR. STODDARD: There are certainly categories of pesticides that don't represent real serious problems to human health or environmental resources.

ASSEMBLYWOMAN WRIGHT: But they would still be considered as high priority wastes?

MR. STODDARD: No, they would not. There are a lot of questions. If I could continue, Madam Chair, for just a few minutes, I think we can resolve a lot of the questions.

CHAIRWOMAN TANNER: Yes, go ahead.

MR. STODDARD: The point that I was trying to make at the end here, is that when we began our study, we knew very, very little about hazardous waste generation and disposal patterns in California. There was information that was available in the Department of Health Services' manifests, but it had not ever been compiled in any manner to give us any kind of picture of what we were dealing with. This was one of the first and major tasks that we tried to undertake, and that was to figure out just what kind of waste was being produced in California, what kind of industries were producing them, where they were going, how they were being handled, and really that has provided the foundation necessary for us to begin looking at alternatives and to determine what the future course of hazardous waste management should look like in California.

CHAIRWOMAN TANNER: I think that's a giant step forward that you were able to do that.

MR. STODDARD: And it needs to continue. A lot of additional work does need to continue. I want to talk a little bit about our high priority wastes, since this is an area that seems to be a major item of interest. One of the major misunderstandings about our report and the program that the Governor has initiated with his Executive Order is that we're trying to eliminate all land disposal of hazardous wastes. I would like to say that we have never considered any kind of broad prohibition on the land

disposal is an acceptable method of handling many of the waste materials that are currently generated within California. What we've found at the outset of our study is that the most critical concept for us in addressing the problem of hazardous waste management in California was understanding the enormous diversity of the kinds of waste streams that we actually have within the state. Our statutes define hazardous wastes very, very broadly. It's any waste which is toxic, corrosive, flammable, a strong sensitizer, or which generates pressure, if those wastes can cause significant injury to human health or to animal livestock or to wildlife. Most of the wastes that are generated in California do not represent serious human health hazards. For those wastes, land disposal should continue to be a viable option for those types of waste materials. Some of our wastes, however, are highly toxic. They are very persistent. These wastes are ones that we feel are inappropriate for land disposal and represent much greater risks to society when placed in a landfill environment and that they deserve special attention. The principal focus of our report is on these high priority wastes, those wastes which represent the greatest risk to society, those which we don't feel should be disposed of in a landfill environment. The criteria that we used for identifying these high priority wastes is their toxicity, their persistence in the environment, their ability to bioaccumulate, and finally their mobility in the environment, either their potential for causing serious ground water contamination, or even serious air pollution problems. The criteria we developed were in consultation with the Department of Health Services and also with our Advisory Committee. When we applied these criteria to

California's waste streams, we came up with the high priority designation. Those are the pesticides, the PCBs, cyanides, toxic metals, hygenator organics, nonhalogenatea volatile organics. Most of these wastes are generated by the chemical and petroleum industries. You can see from the chart to my right that there are a lot of different kinds of products which result in these waste materials - plastic, paints, metals, petroleum products, electronic equipment. As we mentioned before, our industries now dispose of about a half-million tons of those wastes each year in off-site land disposal facilities.

CHAIRWOMAN TANNER: Mr. Elder, do you have...

ASSEMBLYMAN ELDER: Did you say six? I count eight over here. It's close enough for government work, I guess.

MR. STODDARD: No, there is some overlapping. The categories of waste are six. There are six categories of waste.

MR. DAVIS: What we've done is to try to identify...if you look at the chart on the left, we've tried to identify some of the products we use and the high priority wastes that they generate.

MR. STODDARD: I appreciate that. All of those fall into six broad categories that I mentioned. These wastes represent about 40 percent of the total volume of waste that now go to off-site land disposal facilities. That's a substantial volume.

CHAIRWOMAN TANNER: What's the percentage?

MR. STODDARD: Forty percent. We have just got additional information that would indicate that for on-site waste management, the high priority wastes represent a very small percentage of what is now disposed of in on-site landfills. It's

more like three percent, so this is very encouraging for us. Our report focused primarily on off-site land disposal, and we found that indeed that's where the biggest problem now exists with respect to high priority wastes. We'll be talking a little more about this in our conversation.

CHAIRWOMAN TANNER: A question from Mrs. Wright.

ASSEMBLYWOMAN WRIGHT: You're saying 3 percent is on on-site? Is that 3 percent out of the 40 percent?

MR. STODDARD: No. Of the total wastes that are generated and disposed of on-site, only 3 percent of those represent high priority wastes. A very small percentage of the wastes that are handled on-site are these problem chemicals, or problem waste materials.

ASSEMBLYWOMAN WRIGHT: But 40 percent...

MR. STODDARD: Yes. If you look at what goes to off-site landfills, Class I and Class II-I landfills, those high priority wastes represent 40 percent. What that means is that most major producers of hazardous waste ship their high priority wastes off to the off-site landfills. They don't keep them on their own property. That's what the information tells us right now.

ASSEMBLYWOMAN WRIGHT: So the total would be 43, rather than 37.3.?

MR. STODDARD: No, because when you're dealing with two different data bases, we're talking about on-site disposal being something around 16 million tons. Three percent of those 16 million tons comes out somewhere close to a half million tons of high priority wastes.

CHAIRWOMAN TANNER: Do you have any way of knowing how

much that highly hazardous toxic waste is being illegally dumped? Is there any way, is there anything you can...

MR. STODDARD: We have no way of knowing that. There are some figures available on illegal disposal, I think, from the Department of Health Services. But I've never seen anything to indicate what type of wastes those actually are.

CHAIRWOMAN TANNER: But the department certainly should have some answers to that, wouldn't you think?

MR. STODDARD: I would hope so, yes.

CHAIRWOMAN TANNER: I would hope so.

MR. STODDARD: Our report goes into some detail in describing some of the human health effects from these high priority wastes. And in the black briefing binder that you have before you, there is a summary of the health hazards from these high priority wastes. That's Attachment C. If you look at that you can see that most of the waste materials in this high priority waste category are capable of causing death and chronic illness. Some hazardous wastes are carcinogenic in laboratory animals. Clearly these are the wastes which deserve the greatest attention and are the wastes that must be our highest priority for proper waste management within the State of California.

CHAIRWOMAN TANNER: Mr. Sebastiani has a question.

ASSEMBLYMAN SEBASTIANI: What's the difference between mutagenic and birth defects. I don't mean to ask a medical question, but I mean...

MR. STODDARD: Well, birth defects are kind of a broad category. Mutagenics is one type of birth defect, and then there is thratagenics which is another type of birth defect.

ASSEMBLYMAN SEBASTIANI: I see, so they would be subgroups of the birth defects.

MR. STODDARD: When we're talking about mutagenesis, we're talking about actual alteration of genetic material.

ASSEMBLYMAN SEBASTIANI: I see, I see. Okay, thank you.

MR. STODDARD: I'd like to just close on this discussion of high priority waste by saying that what we know today about the long-term potential problems from land disposal and that potential human health effects from many of these materials, I think it would be irresponsible for the state to continue to use the least desirable and highest risk method of waste disposal for what we know are most toxic, and are most long-lived chemicals. This committee has heard a lot about alternative technologies over the last year and a half or so, including the hearings that were held down in Los Angeles, I think last November. Unfortunately, most of the time when we're talking about alternative technologies, we're talking about technologies that are used in some other state or some other country. These technologies have not been used extensively in California. As a result they're often perceived to be exotic long-term solutions to our waste management problems, solutions which have little direct application to our immediate waste problems. This perception is simply not true. Alternative waste management technologies represent the safest, the most expedient method of dealing with a waste problem which in California is now reaching crisis proportions. The alternative waste management facilities we must recognize are more acceptable to local officials and to citizens. They are far more likely to

be sited, permitted and operational before we see any construction of new land disposal facilities.

CHAIRWOMAN TANNER: I have a question on that. The siting of facilities, any hazardous waste or toxic facilities, will have to be done through the permit process?

MR. STODDARD: That's correct.

CHAIRWOMAN TANNER: And generally done with cooperation of local government?

MR. STODDARD: Right.

CHAIRWOMAN TANNER: How do you suppose...explain your streamlining of the permit process, because I really believe that what you are saying is very important and very necessary. I'm concerned about permitting and the public accepting those facilities.

MR. STODDARD: I think your concerns are legitimate and I can switch to a discussion right now of what you're trying to do to streamline the permit process. We understand that facility permitting is a major concern to industry. It's a major concern to us, because we will not be successful in implementing our program if we cannot get new facilities. We agree that major improvements are needed in the permitting process and we've already started several steps that are intended to streamline that process. One thing that we should understand though is that a lot of the criticisms about the permit process are based on our experience in trying to site and permit land disposal facilities, facilities that we know are at the bottom of the list of preferred technologies for waste management. I believe that we can't jump directly from our experience with trying to site land disposal facilities and

conclude that it's going to be just as difficult to site waste management facilities, treatment facilities, recycling facilities, transfer stations. I believe we'll be far more successful if we pick good technologies and we select good sites. Let me be specific about some of the improvements we're making in the permit process. The essence of the whole program right now is to improve the coordination at the state level and to provide for greater expedience. We're not attempting to change statutes. We're not attempting to change any regulations. We think we can get the process down to a single year, and that year would include the preparation of the environmental documentation as well as the processing of all necessary permits. But we have already met with the department directors of Health Services, the Air Board, the Chairwoman of State Water Resources Control Board. All have agreed to four basic elements that I think represent very significant improvements in our process. First, all state agencies will participate in preapplication meetings convened by the Office of Permit Assistance. These meetings will insure that many problems are resolved between the applicant and permitting agencies before the final permit is even submitted to the state.

CHAIRWOMAN TANNER: Do you know how many permits there are pending now, or applications there are pending now, and how few permits there are?

MR. STODDARD: I believe there are about three or four permit applications in the works right now for facilities that we would consider to be alternative waste management facilities. We know of many others that will be submitted very shortly. We just had one of these preapplication meetings last week on the

proposed BKK facility for Wilmington. That facility is a major treatment facility that will handle a major portion of the waste which now goes to the West Covina landfill. In your briefing binder, there is a list of the attendees at that meeting, Attachment G. You'll notice that every agency - state, regional, local - with any jurisdiction over this project was in attendance at that meeting. There were no major obstacles that were identified and all the agencies I think were extremely cooperative in trying to move this project just as quickly as possible.

CHAIRWOMAN TANNER: That's exciting. I hope that it works that way.

MR. STODDARD: I do, too.

CHAIRWOMAN TANNER: Yes.

ASSEMBLYWOMAN WRIGHT: What is the time frame now, as compared to what it was?

MR. STODDARD: Well, it's difficult to say what it was because it could stretch out from 18 months which is the legal requirement under AB 884 for a permit decision to be made, but it could stretch out much longer if there were delays in getting information or if a lead agency decided that they didn't have the information that they really needed to process the permit.

ASSEMBLYWOMAN WRIGHT: But what's your top priority now?

MR. STODDARD: We're saying that we think that we can do it within a year.

ASSEMBLYWOMAN WRIGHT: What do you think the time frame is now?

MR. STODDARD: We think we can do it within a year.

ASSEMBLYWOMAN WRIGHT: Not less than a year?

MR. STODDARD: In some cases less than a year.

ASSEMBLYWOMAN WRIGHT: Is that also taking into consideration the local land use process?

MR. STODDARD: Yes. The local land use process can be managed within a one-year period. That's not to suggest that every local agency will choose to grant approval to these kinds of facilities, but there is no reason we can't have decisions within that time frame.

ASSEMBLYWOMAN WRIGHT: I really feel that you're being too optimistic with your alternative technologies of being able to site those with local people's input, because I still feel that whether you call it an alternate technology or whether you call it a landfill, the people in those areas where you want to place that facility are going to be up in arms about it. And I'll give you a good example. I think Dave Elder can address what's happening in Long Beach with the transfer station.

ASSEMBLYMAN ELDER: I would like to.

CHAIRWOMAN TANNER: Why don't you.

ASSEMBLYMAN ELDER: Well, basically the problem with the transfer station in Long Beach was the subject of a bill, 2030 which died in this committee on a 3-3 vote to prevent it from being constructed within a thousand feet of residential property, I don't think that's a burdensome requirement. The city basically moved to make it a mile, which if you take a mile from anywhere in Long Beach residential, that means it doesn't get built in Long Beach. Because there is no, as far as I can determine, industrial property located farther than a mile from any existing residential, so that was a blanket exclusion. the city councilmen in

Long Beach today voted on a vote of 7-2 this morning to modify the proposal of one mile down to 2,000 feet, so that it doesn't make it automatically possible for a transfer station to exist. And frankly the local people who had opposed the transfer site in Long Beach urged the council to go from the 5,000 to one mile, down to the 2,000 because they felt that this would create a certain momentum for preemption here at the state level with respect to the issue of siting. So as far as Long Beach is concerned, there has been, I think, a certain level of political courage on the part of the city council to do as they did, and a significant maturation process as far as the public is concerned, those who were previously fighting the proposal. As I understand it, and I think there is a representative from the chemical waste management here, the option on the property in question expired on October 1, so that proposal is I guess dead. And talking to oil operators who I think own the property, they have no plans to proceed with that. So the city also suggested an alternative site which is something that I suggested in an unincorporated area, approximately 1800 acres in an industrial area in the Carson-Dominguez area within the spirit of influence of the cities of Carson, Long Beach, and Compton. And there are ample areas in there for transfer stations, and it is all zoned M-1 area, and II, which makes more sense than putting it next to residential R-1 development within 50 feet, I might add of residential development. So that's kind of the status of Long Beach. Hopefully if a proposal comes forward, they'll not try to build it next to R-1 development.

CHAIRWOMAN TANNER: The point being that there is resistance or there is likely to be resistance to facilities,

although our responsibility is to see to it that the waste that's generated is disposed of or treated, or what have you.

MR. STODDARD: We recognize that resistance. I think the encouraging thing about the story that Mr. Elder just discussed is that we see the citizens for the first time coming in and applying pressure on the city council to reduce the buffer zone requirement from one mile to 2,000 feet. Now we haven't seen that in the State of California before to my knowledge, where the citizens are saying we realize we have to have some kind of facility and we also realize that one mile is not going to provide that kind of facility. We see that as encouraging and we have to go further than that, but it's certainly a step in the right direction.

The other thing that we have to remember is that there is no permit process or no siting process that will ever overcome a bad proposal. If industry decides to build a facility in a location that is not well-suited for that facility or they decide to use technologies which are not state of the art technologies for the treatment of those materials, I don't think we could possibly design a process that would allow that to be sited, constructed, permitted at all. I think we have to be more careful in the kind of proposals that we put forward for waste management facilities, because I think we have made a lot of mistakes in the past and tried to propose the wrong facility, in the wrong place with the wrong technologies.

CHAIRWOMAN TANNER: I'm hoping that the bill...I think that the Senate will concur with 1543, the siting bill. It will provide means for and methods of siting facilities, and I'm hoping

that this is a vehicle that we can use.

MR. STODDARD: Yes, we agree. I want to talk very briefly about the cost of alternative technologies because this is an issue we hear a lot about.

CHAIRWOMAN TANNER: We're going to have to start moving along.

MR. STODDARD: Okay. And it is a major concern to industry. It's ironic that the reason California was able to lead the nation in developing the first comprehensive waste management program in the early '70s is now the reason that we have a major obstacle really in trying to build alternative treatment facilities. And the reason is that we have had a cheap abundant supply of land disposal capacity. Even today we have seven Class I landfills, we have 17 Class II-1 landfills, we are one of the few states in which the supply of landfill capacity exceeds our demand for that capacity. That's not to suggest that all the facilities are in the right place. But we do have an abundance of landfill capacity and it is very inexpensive. Land disposal in California is cheaper than just about anywhere in the country. For $30-45 a ton, you can dispose of just about any type of bulk hazardous waste. What we've found is that it is impossible for alternative technologies to compete on any kind of economic basis with that artificially low cost of land disposal. I say artificially low because it certianly doesn't include all the cost associated with the clean-up or potential clean-up of land disposal sites. And I'm sure this committee understands perhaps better than any other the magnitude of the cost that California is facing today in cleaning up abandoned dump sites. There is some question of

of whether or not the problem exceeds our ability to pay, and I think you'll hear testimony later on today that suggests that this is a far more serious problem than we ever even recognized in the past. Landfills will always be cheaper than alternative technologies in the short-run, with perhaps a few exceptions on various simple technologies. But for highly toxic and persistent materials, landfill will always be a false economy. It's no bargain today, based on what you pay at the gate. It is no bargain in the long-term if you have to go in and clean-up a site that is contaminated with highly toxic materials. The risks are substantial. They probably can't even be quantified, particularly with respect to human health. It's important to realize that the additional cost to industry of using alternative technologies will be reduced as the cost of land disposal increases which it definitely will do. We see major trends that would indicate that the cost of land disposal is going up pretty significantly. These increased costs will also be off-set by avoiding clean-up and liability costs. So in the long-run, we feel alternative technologies are really a good bargain. They're a good investment. They provide some short-term economic hardships for those who have to make investments in new technologies, but we feel that there's a lot...

CHAIRWOMAN TANNER: Question.

ASSEMBLYMAN KATZ: Talking to what you're talking to right now, short-term economic hardships, do you in the OAT Report or in your proposals differentiate at all between the size of the business that we're dealing with? I mean there has been a trend in government over the years to treat all businesses and monolithic structures as one big size and not to differentiate, to the

economic hardship that a small business may have in complying as opposed to a big business. Do you take that into account?

MR. STODDARD: Yes, we do. Although it is our intent to go after "high priority" waste regardless of who generates them. It is important to realize there are 37 companies...

ASSEMBLYMAN KATZ: How do you take that into account?

MR. STODDARD: Let me explain. First of all, the impact on small businesses may not be as great as we initially thought. We find that 37 companies in California generate 60 percent of all the waste which go to off-site landfills. So we can go further and say 250 companies generate 87 percent of all of the wastes which go to off-site landfills. So we don't have a lot of small generators out there with a serious problem. The exceptions are small metal platers, some people in the printing business. Senate Bill 810 was our major effort to try to address that problem, the financial incentives that are provided in SB 810 which provides outright grants, low-interest loans, rapid amortization, and expanded use of pollution control financing are directed primarily at small businesses.

ASSEMBLYMAN KATZ: What happens though if, I mean you have the Executive Order, you have the OAT Report, and you don't have SB 810 - what happens to small business at that point?

MR. STODDARD: I think we would have to go to a system in which we provided some kind of exemptions for those who simply could not afford to use the technologies that we felt were so necessary. Hopefully we will have 810.

ASSEMBLYMAN KATZ: But my concern here is that you have some mandates, you have a possibility of a bill, but you said

already that your goal will be to go after the highly toxic producers regardless of size, obviously, and I understand that - but again in your Executive Order and in the implementation, you don't have any contingencies for any relief of those small businesses that may be placed in an unfair disadvantage if 810 does not become law.

MR. STODDARD: Perhaps our failure is that we haven't been very explicit in what we're trying to do with the ban or the phase-out on high priority wastes. We don't have a mandate right now. We only have a mandate really to develop a program to phase-out these waste materials. One of the things that's critical for us and it was mentioned earlier, are these workshops in February. We have mailed out a discussion paper to every generator we feel would probably be affected by this program, and what we've asked is we want to find out what kind of problems it would create for them, what the state can do to alleviate some of those problems. We're very, very serious about not contributing to the problems of illegal disposal within the State of California. And we recognize that if we come down with a heavy program that certain components of industry cannot afford, the program will not help the citizens of this state. It will lead to a bigger problem than what we have today. So we are very sensitive to that problem. We've also been working with the Office of Small Business Development in trying to reach those on a very direct basis that we feel are going to be most affected in terms of small businesses by this program.

ASSEMBLYMAN KATZ: You're mailing out one of your questionnaires to all small businesses that are involved in this area?

MR. STODDARD: I can't say that it went to all small businesses, or I shouldn't say that. We distributed several thousand announcements of these workshops that went to all the companies that are on-site, transfer storage, disposal facilities and we also asked the Office of Small Business Development to help put together a list of those businesses that they felt would be affected by our program. And I don't have that list in front of me, but I'd be glad to provide it to you at a later time.

ASSEMBLYMAN KATZ: My concern without belaboring the point goes back to, I mean if you look at who has an opportunity to participate in your workshops, or who has the authority or the time or the money to spend on be it lawyers or consultants or tax preparers or what have you. It's not the electronics company, or the electro-plating company, or what have you - it's the larger companies. Yet at the same time the company when faced with an additional burden that's going to dump something at night because they just can't afford not to is the small electronic plating company. And I'm concerned that these are also the people that don't have time to spend a lot of time filling out questionnaires. They are operating, you know, a three or four person operation. It's on a margin. They can't take a half day off and go to a government sponsored workshop. They probably don't believe in them to begin with. It's obviously difficult from your standpoint that they're not in a position to give you the input that you need, but on the other hand I'm afraid that we're not taking to account enough of what their problems are as well.

MR. STODDARD: One of the things we have done, and I should have mentioned to you - we're trying to work very actively

with trade associations and we have been in contact with the Metal Finishers Association. And they are actually eligible for financial assistance under SB 810 to do cooperative planning and technology development work for their constituents. So we are trying to reach a lot of small businesses that we know don't have the resources to actively participate in these workshops through their associations and I hope we'll be successful in doing that.

CHAIRWOMAN TANNER: Question.

ASSEMBLYWOMAN WRIGHT: ...going to the Chambers of Commerce, I would imagine that's where you are really going to hit your small businessmen.

MR. STODDARD: I believe we hit most of the Chambers of Commerce in the major industrialized areas within the state, and also we've been working with the California Manufacturer's Association as well. We've tried to provide information to them that they can incorporate into all their newsletters on the proposed program.

CHAIRWOMAN TANNER: Why don't you continue then.

MR. STODDARD: Let me just quickly run through some of the major conclusions of the report.

I believe these conclusions warrant a major an aggressive redirection of the state's hazardous waste management program. We cannot ignore that there are many serious and unresolved questions about whether land disposal systems can be made to operate effectively and efficiently for long periods of time. We know that technologies exist for the safe management of hazardous wastes. We also know that it is technically feasible to recycle, treat, or destroy 75 percent of all our hazardous waste which now go to

landfills. We know that the additional cost resulting from the use of alternative technologies will have a minimal effect on California industries and that that additional cost is justified given the enormous potential risks that these "high priority" wastes represent. Finally, we must not ignore that most of the alternative waste treatment capacity needed in California can be developed more quickly than the time it would take to build new land disposal facilities. We had intended to talk about some of the major programs that the state has undertaken since the signing of the Executive Order. I think we'd like to start with certainly the most important, and that's just where we are on this phase-out program. Gary Davis who's with me is a chemical engineer and an attorney with our program. He's been working with the Department of Health Services, the Air Resources Board, the Water Board and he can provide a description of just how we're intending to proceed with this phase-out program.

CHAIRWOMAN TANNER: I'd like to hear that because I'm wondering if the Executive Order would ban certain materials, if there is going to be a feasible way to dispose of or treat the materials that will be banned from the landfill. And if the time will allow, this is the question that we keep...

MR. DAVIS: Well, those are the questions that I'd like to address.

CHAIRWOMAN TANNER: Will you identify yourself.

MR. DAVIS: My name is Gary Davis. I'm a Waste Management Specialist for the Office of Appropriate Technology Toxic Waste Assessment Program. Madam Chair and members of the Committee, I would like to explain this process by which w're going to

phase-out the land disposal of highly toxic wastes in the state. And I'd like to do this so that we can lay to rest some of the misconceptions that you may have heard about this program. I will tell you briefly about the statutory authority supporting the phase-out, the interagency task force that was formed to develop the regulations, and a discussion paper that was prepared by this task force which outlines the types of waste to be phased-out, and the proposed schedule and that is your concern, the proposed schedule. Well, as a matter of fact, I'll start with that. There is a lot of concern that the technologies won't be available. First of all, I'd like to say that we don't intend to ban something from landfill if there are no technologies available, if there is nowhere else for this to go. I mean it's never been the intent of the Governor's program. The Department of Health Services wouldn't support a program like that even if they are under gun, because there will be nowhere for the waste to go and that is not the intent. Let me start by talking about the Executive Order and statutory authority then. The Governor's Executive Order of October 13th directed the Department of Health Services to utilize their existing statutory authority to begin phasing-out the land disposal of some of these high priority wastes in the state. That statutory authority is clear. Provisions in the Health and Safety Code direct the department to adopt new standards and regulations for the handling, processing, recovery, storage, and disposal of hazardous and extremely hazardous wastes. Also, the provisions dealing with extremely hazardous wastes state that no extremely hazardous waste may be disposed of without prior processing to remove its harmful properties or is specified by the regulations

of the department for the handling and disposal of the particular extremely hazardous wastes. In the past the department has prohibited waste from land disposal under their existing regulations, such waste as Class A explosives, water reactors, and vinyl chloride waste by revision of the facility permits under the existing regulations. So essentially the Executive Order directed the department to do what it has already been doing, only in a broader manner with much greater applicability, and for this reason and also because of the dictates of AB 1111, which established the Office of Administrative Law. We're going to have new regulations to implement the phase-out of land disposal. And the process of developing these new regulations is well under way. The two unique aspects in the way these regulations are being developed - first, because the hazardous waste problem is also a serious air pollution and water pollution problem, the Department of Health Services requested the Air Resources Board and the State Water Resources Control Board to participate in an interagency task force to develop these regulations. This is necessary because it will minimize the applicative regulations and jurisdictional problems on the state level. Secondly, in order to enable us to develop regulations that are technically sound and not overly burdensome, the task force is soliciting the input of the regulated community and other interested parties at the earliest possible stage before proposed regulations have been written.

CHAIRWOMAN TANNER: You mean a public hearing, or a...

MR. DAVIS: These are the workshops that you've been hearing about today. We've also solicited written comments as well as planning to conduct these workshops with people who can

present oral testimony. The first step that was prior to this was to prepare a discussion paper which talked about the types of wastes that are being considered for elimination from land disposal. A time frame for doing so in the regulatory approach and this discussion paper is what Kent was talking about that has been mailed to over 1,500 generators and disposers of hazardous wastes, trade associations, environmental consultants, university departments, state, and local officials all over the state to solicit their comments. And I'm a member of this task force and I'm kind of the focal point for comments and questions about this discussion paper. I've already personally talked with over 15 industry representatives that have had questions or comments concerning the discussion paper since it's been issued. The workshops that have been mentioned are February 16th in Los Angeles and February 19th in Berkeley. As a matter of fact, in your briefing package your black notebook, Attachment H, is the discussion paper that went out to people for their comments.

CHAIRWOMAN TANNER: Yes. Question from Mr. Elder.

ASSEMBLYMAN ELDER: What are you trying to produce here? Are you trying to produce a law, a program? What is it you're going to call this when you get, whatever it is?

MR. STODDARD: We don't know what we're going to call it. These will be regulations. They're under the Health and Safety Code Statutes that the department operates under. The statutes give them the authority to specify what can and cannot be land disposals.

ASSEMBLYMAN ELDER: Would what you are doing require an EIR?

MR. STODDARD: The regulations?

ASSEMBLYMAN ELDER: Yes.

MR. STODDARD: I'm not aware that state regulations require EIRs.

ASSEMBLYMAN ELDER: I don't know if they were ever going to be, but I, you know...

MR. DAVIS: I think the regulations would actually represent a reduction in environmental hazard. They represent a mitigation measure to an existing problem. I don't think they would...

ASSEMBLYMAN ELDER: So you'd go for negative deck?

MR. STODDARD: I've never heard of a state agency preparing an EIR for regulations. I may be wrong.

ASSEMBLYMAN ELDER: I'm not trying to make it more complicated because you've got a job program here for at least three years that I can see. I noticed in this meeting here you had 22 people and only five of them were private industry and the other 17 were from all the regulators. That's not fair. I mean you should try to even those things out.

MR. STODDARD: Oh, that meeting was to talk about a specific permit for the BKK people.

MR. DAVIS: But as far as the regulations go, I mean there are going to be five of us sitting there listening to hundreds of industry people, so that I think that we will hear their concerns. And I think the regulations can be developed a lot quicker.

ASSEMBLYMAN ELDER: So you don't know whether it will require an EIR?

MR. DAVIS: I'm sure that it's not.

ASSEMBLYMAN ELDER: You're an attorney. Is that correct?

MR. DAVIS: Yes, that's correct.

ASSEMBLYMAN ELDER: And you're a chemical engineer?

MR. DAVIS: Yes, sir.

ASSEMBLYMAN ELDER: And you don't know whether it's exempt under CEQA or not, or NEPA, or all the other fine things that we have.

MR. DAVIS: We can certainly find out.

MR. DAVIS: It would truly surprise me if there was any requirement, but I'm sure there is none. The facilities themselves will require an EIR, I understand, and that's one of the things that...

CHAIRWOMAN TANNER: We have a member of the Legislative Counsel here who could probably respond to that. Could you, John, respond to that?

MR. JOHN MOGER: It's my understanding that the intent here is to develop regulations to promote the alternative destruction or disposal of hazardous materials in a manner other than landfill. The necessity for an EIR would be what do you do with the residual, where do you site it, and how do you do it if it has any impact upon the environment. CEQA requires an environmental impact assessment to be made determined by the facts behind it of where and how you're going to do this, and what are the waste streams coming out of it. For example, I can't visualize the destruction of any material that doesn't have some waste product. It might be a nonhazardous waste product but nonetheless a waste product. This would of necessity fall well within CEQA.

MR. STODDARD: Well, these are already being disposed of in existing landfills, and that's where the treatment residuals would continue to go. I guess the question was whether regulations themselves require an environmental impact review, and I'm not aware of any requirements there.

MR. DAVIS: I should point out that we are not regulators. Our role in this is purely advisory on a technical basis. The Department of Health Services, they are the regulators - so if we appear confused, it's because we are not regulators.

CHAIRWOMAN TANNER: When an application comes in and there will be a report involved, but I have never heard of a regulator having to fall off in the aisle and I think we're going to unless there is a really very important question. I think we are going to have to move along because we have a lot of witnesses.

ASSEMBLYWOMAN WRIGHT: I was going to ask a question. I was just going to catch a break right here and I was going to ask you, if you think it possible we can hear these state representatives anytime you want to, if we could skip over some of those and go right to the public input and the companies that are here from out of town.

CHAIRWOMAN TANNER: Well, I believe that it's important to get an idea of what the OAT Report is and I do believe that it is important for you to continue this testimony. Continue with your testimony.

MR. STODDARD: Well, Mrs. Wright, this is responding directly to your question about how the phase-out is going to work. So I would appreciate being able to continue with it.

ASSEMBLYWOMAN WRIGHT: Well, I wasn't trying to cut you

off. I was just thinking, because I'm looking in terms to keep seeing departments and I just thought, you know, we can talk to those fellows anytime.

MR. STODDARD: I would like to refer you to your briefing package to Attachments I-K, in order to explain regulatory questions we're considering. First, the task force has identified the waste hazards that we believe present the greatest risk to the California public environment when you dispose of it in the land. These don't exactly coincide with the high priority wastes because the high priority wastes and the OAT Report were not created for any regulatory purposes. So this has been greatly refined from the six general categories. Even though we did use the general criteria of toxicity in the environment and mobility in a landfill environment. Once the types of wastes were identified and these are listed in Attachment I in your briefing document - they refined these categories. Well, I mentioned that because it answers two of the major concerns that industry representatives have raised about the use of broad categories of wastes in the OAT Report and in the implementation program. These are being refined. Can we identify the types of wastes to be phased-out of land disposal? The task force determines the types of process that's capable of recycling, treating, or destorying these wastes. These are summarized in Attachment J, and were determined on the basis of the technology assessment in the OAT Report. Then the task force set dates for the phase-out of these different types of wastes. They assign an assessment of when the alternative facilities can be available. This assessment took into account the proposals for waste treatment facilities that have come as a response to the new

state policy, and the permitting and construction times that we anticipate. I'd like to walk through Attachment K, which has a synopsis of the schedule.

CHAIRWOMAN TANNER: All right. Because I feel that's really important.

MR. STODDARD: The first point I want to make is that only a small fraction of the waste stream will be phased-out of land disposal. When taking into account our preliminary estimates...

CHAIRWOMAN TANNER: Isn't that about 40 percent?

MR. STODDARD: Well, that is the off-site waste. When taking into account the estimates of on-site hazardous waste disposal, we're only talking about six percent of the total state waste stream, and these are preliminary numbers for on-site. But what those prelininary numbers show us is that there is very little in the way of high priority wastes being land disposed on-site. So only six percent of the state's waste will be affected by this. And you can see the quantities on Attachment K in your briefing document. The second point I want to make is that the first step of the phase-out, the January 1, 1983 date, is the smallest. Less than two percent of the waste stream will be prohibited at that time. And these are wastes for which the alternative treatment facilities are either already available or rapidly approaching availability.

CHAIRWOMAN TANNER: I see PCB there. You mean we're approaching the availability of...

MR. STODDARD: Oh, that was for July '83, but I'll get to that one in just a second if you'll let me talk about the January deadline. The IT facility in Martinez can already handle

cyanide waste. They haven't been operating at capacity from what I understand because a lot of it is going to landfill right now. And there are likely to be two more cyanide treatment facilities located in Southern California by the summer or fall of this year. They're permitted and operating. For the volatile organic wastes, as you will hear some more about later, we're close to permitting a cement kiln to burn these concentrated organic wastes that have high fuel value that can displace fossil fuels now on July 1, 1983.

CHAIRWOMAN TANNER: The cement kiln. Do we have a witness here representing that industry? I understand that there are serious problems about...

MR. STODDARD: We strongly disagree with that. We've been working on a cement kilm project for about six months and the one that's under consideration now. There are not any serious problems with that facility.

CHAIRWOMAN TANNER: The problem of liability then?

MR. STODDARD: There are no problems with liability. Now it depends on the type of waste that they plan to burn and the proposal that we have in right now are common industrial solvents. If we were to burn PCBs, then we may have a potential liability problem, but right now, the application that we have in would burn a large volume of our high priority wastes. I can see no major impediments to permitting that particular project.

ASSEMBLYWOMAN WRIGHT: We're testing in the State of California?

MR. STODDARD: The permit that we are issuing is a test burn permit. It will last for six months and it will be closely supervised by the State of California.

ASSEMBLYWOMAN WRIGHT: And how much do you anticipate they are going to be able to burn off in the next six-month period?

MR. STODDARD: Well, it's difficult to say. The maximum capacity would be 20,000 gallons of solvents per day. We will not operate nearly...

ASSEMBLYWOMAN WRIGHT: Are you talking about one particular kind of solvent?

MR. STODDARD: There are about 40 common industrial solvents.

ASSEMBLYWOMAN WRIGHT: And there are none that you see that are going to be a problem to burn. You've tested them all?

MR. STODDARD: They have been tested. The company that is proposing to do this project has been burning industrial solvents, the same solvents in the State of Ohio, for over three years.

It's a program that's been endorsed by the environmental agencies within Ohio. Extensive tests have been done both on air emissions and the quality of the cement product. There are no problems with this particular project. It is a fuel substitution.

ASSEMBLYWOMAN WRIGHT: I'd like to hear you talk about that. That's not what I'm hearing.

MR. STODDARD: Would you like me to continue?

CHAIRWOMAN TANNER: You can continue.

MR. STODDARD: All right. Now on July 1, 1983, for the date of the phase-out then, we're talking about four types of wastes to be phased out of land disposals. The first three can all be treated in facilities for organic wastes. There are now at least four proposals for this type of facility in Southern California of which the BKK Wilmington facility is in the most advanced stage.

In Northern California, the IT facility now treats some of these wastes, and there are two other proposals in preliminary stages. So we anticipate that these types of facilities will be on line by July '83. Alternative technology for PCB liquids should also be available by July 1983. Since the EPA has already banned land disposal of PCB liquids, most are either sent out of the state for incineration or stored in anticipation of the use of portable detoxification processing. The task force decided to extend the EPA ban to cover more of the low concentration PCB oils that are now disposed of in this state. The portable processes for detoxifying these are now being used in other parts of the country and have been permitted by the EPA in other parts of the country and should be permitted for use in California within the next few months so they can drive the truck right up to PG&E and treat their PCB liquids.

CHAIRWOMAN TANNER: And the other agencies involved are agreeing that that...

MR. STODDARD: Yes, Health Service is behind these technologies as well.

CHAIRWOMAN TANNER: And Air Resources?

MR. DAVIS: It resolves from the air emission which makes it a superior technology to incineration for these oils.

Toxic organic liquids, solids and sludges are slated to be phased out in January and July of 1984. And these include halogenic organic waste and wastes considered extremely hazardous. These will require destruction in incinerators designed with advanced air pollution control equipment. And since these incinerators have longer construction time and may be more difficult to

permit, phase out of these materials has been deferred to 1984. There have been three proposals to build land base incinerators in California to handle these wastes and one to install incinerators on ocean-going barges to burn these wastes far out at sea. We fully expect to see...Yes?

ASSEMBLYMAN ELDER: You're not seriously considering putting ocean-going barges as a...where do you think that the coastal areas are going to be the receiver areas - and I might add that I represent the Port of Long Beach and I'm just not terribly thrilled with the possibility of taking toxic wastes down the Long Beach Freeway to load onto barges to burn at sea, which an onshore breeze is going to come right back into our air basin.

MR. DAVIS: Well, we're not totally thrilled about the idea either. We're looking at it very skeptically.

CHAIRWOMAN TANNER: It's being done currently though.

MR. DAVIS: It's being done right now. There's a ship on the East Coast - about a week or two ago, that has been burning PCBs in the Gulf of Mexico, and it's owned by the largest waste management in the world, Chem Waste Management. That ship is called the Volcanist. Another company came to us. They asked us not to mention their name yet. They are proposing to take these 200 miles out to sea and burn them. And they don't intend to include any loading facilities at the dock. They want to drive the trucks right up to the barge and suck it out of the truck onto the barge into tanks there. We have some questions about the safety of that, and naturally they would have to go through all permitting processes before it would ever be allowed. But some people see this as a real alternative to land-based incineration, because in

land-based incineration, you have fixed sources of the air emission. And you can't really get away from people if you're trying to do this on land. And that is the reason why people are considering going far out to sea to do this.

ASSEMBLYMAN ELDER: Is this going on in California now?

MR. DAVIS: No, it isn't. It's being done, like I said, in the Gulf of Mexico. It has been...those are test burned PCBs that's been done over the last month in the Gulf of Mexico. And this ship, the Volcanist, has been doing this. It has been burning hazardous waste for five or ten years.

ASSEMBLYMAN ELDER: The point with the cement kiln operation is its effectively cogeneration essentially, isn't it. You are involved with two things?

MR. DAVIS: Yes.

MR. STODDARD: Definitely, definitely.

ASSEMBLYMAN ELDER: It seems to me that in terms of barges, you don't capture any of that increment with respect to the energy problem.

MR. STODDARD: No, not at all.

ASSEMBLYMAN ELDER: Unless you keel the vessels, and you're not doing that because you're going to use a tug to take them out.

MR. STODDARD: Right.

MR. DAVIS: That's why we've been so supportive of cement kiln incineration. It offers so many advantages. There are fuel savings, you know, conventional fossil fuels, and a cement industry is a huge consumer of fossil fuels. Also the temperatures are so extreme in a cement kiln, 2,600 degrees Fahrenheit. That's

well above the temperature of conventional incinerators, well above the EPA standards for destruction. So what we have is a very, very rugged environment that's required to make cement and it just turns out to be an ideal waste incinerator, as well.

ASSEMBLYMAN ELDER: You let me know if you hear about anybody doing any barge work, okay?

MR. STODDARD: Okay.

ASSEMBLYMAN ELDER: I'll be down there with whatever number of lawyers it takes to put them in jail, if not to hang them up in the EIR process. I don't want them in California.

MR. STODDARD: Can I continue? Thank you.

Finally, the volatile organic wastes in the solution of toxic organics will be phased out in 1984, and can be handled by a number of different processes. The IT facility in Martinez already handles some of these volatile organic wastes where they separate them from water and burn them in a small incinerator there. There are also three proposals in various stages of development to detoxify these wastes. Now I want to end on this. It's true that this is a tight schedule. But several major companies in the hazardous waste treatment industry have told us that they can meet it. One thing I'd like to make clear though, is that if the alternative facilities are not available in time for these scheduled phase-out dates, there will be a provision in the regulations that permits an extension to allow land disposal to be continued. We will not ban wastes from land disposal if there is nowhere else for them to go - I mean the Department of Health Services and everyone on this task force feels that very strongly. We don't want to make these extensions too easy, though. What the

treatment industry has been waiting for are some clear signals that will not have to compete against cheap land disposals. It's almost a chicken and egg problem - as long as we keep shifting some of the future costs of land disposal onto the public in the form of health effects, environmental impacts, and clean-up costs, alternative technologies will not be utilized. It is clear that short of state ownership...

CHAIRWOMAN TANNER: A question by Assemblyman Sher.

ASSEMBLYMAN SHER: I just want to ask whether the phase-out schedule which you say is open to refinement is one of the subjects that will be considered at these workshops that you're sponsoring?

MR. STODDARD: Yes, most definitely.

ASSEMBLYMAN SHER: And is it possible that as a result of those workshops, you might conclude even at the early date when those workshops are over, that there might be some refinements required?

MR. STODDARD: Yes, that's quite possible. And we'll be glad to let the committee know about them.

MR. DAVIS: It is clear though, that short of state ownership, the only way that we can create the system of recycling, treatment and destruction facilities necessary in this state to safely manage high priority wastes is to phase-out the land disposal of these wastes on an aggressive but reasonable schedule. Thank you very much.

CHAIRWOMAN TANNER: Thank you very much. Kent, you have something?

MR. STODDARD: Yes. We had a lot of other information

that we won't try to get through because of the time constraints. I did want to close on just one note, and that is on this chart to my right, there is a whole list of programs that we're very actively pursuing right now. Most of those are in support of number eight at the bottom of the list which is the phase-out of the high priority wastes. Clearly the burden is on us to produce new facilities. If we can't do that, we don't have any phase-out on the land disposal of high priority wastes. Most of the items on that list are intended to produce facilities, and we're very serious but we accept the responsibility knowing full well that we have to improve the permit process. We've got to provide financial incentives. There is a lot of work that needs to be done at the state level if we're going to see the construction of advance waste treatment technologies in California.

CHAIRWOMAN TANNER: Sounds like a very exciting program.

ASSEMBLYWOMAN WRIGHT: Will this committee see those regulations before they are implemented?

MR. STODDARD: We would be glad to...I shouldn't speak for Health Services, but I believe they would be more than willing to provide a copy of those regulations.

CHAIRWOMAN TANNER: But we can ask Health Services. Why don't we do that. Thank you.

ASSEMBLYWOMAN WRIGHT: Before we approve their budget, right?

CHAIRWOMAN TANNER: The next witness will be Robert Stephens, the Deputy Director of the Department of Health Services. Maybe we can ask him that question.

ASSEMBLYWOMAN WRIGHT: Do you think he can wait until

some of the public input, because we've got two hours to...

CHAIRWOMAN TANNER: No, this is the planned agenda.

ASSEMBLYWOMAN WRIGHT: You're going to follow through with it?

CHAIRWOMAN TANNER: Yes, I'm going to follow through.

ASSEMBLYWOMAN WRIGHT: How long do you plan on staying here?

CHAIRWOMAN TANNER: I'm hoping that we're out of here by six.

DR. ROBERT STEPHENS: I'll try to be brief.

CHAIRWOMAN TANNER: Thank you. Would you identify yourself, please?

DR. STEPHENS: My name is Bob Stephens. I'm Deputy Director of the Department of Health Services and I'd like to thank the committee for an opportunity to make a statement. I will try to be be brief. I will be playing two roles here today, though. First, I'd like to make a few comments, brief comments on my familiarity with a lot of the currently operating waste management systems in Western Europe and Japan. Secondly, I'd like to put on my hat as the Deputy Director of the Department and make a few policy statements about how we are currently organizing and supporting this particular program.

In 1980 under the initiation of the President's Office of Science and Technology Policy and under the sponsorhip of the U.S. EPA, Office of Research and Development, a program was begun under the auspices of the organization of Economic Cooperation and Development to assess the technology and existence in the workability of hazardous waste management systems within that community

of nations including 24 countries, Western Europe, U.S., Canada, Japan, Australia, and New Zealand. An objective was also to assess the magnitude of the problem posed by uncontrolled hazardous waste sites, contaminated land, or (French expression) as the French call them, resulting from past practices of landfilling of hazardous chemicals. As the principal in this program, I visited 14 nations within Western Europe and Japan. I met with government officials, private sector, scientists and engineers, with local and national regulatory officials, and with corporate executives. I visited firsthand operating advanced technology facilities in eight countries. I cannot review, of course, all of the findings of this program; however, I would like to make a few general statements. I'd like to briefly highlight two specific waste management systems which I think are exemplary which currently operate in our ...they're currently operational. To give you somewhat of a feel for what is possible - then I'd like to, I think importantly, give some overview comments on why such systems are in place today, how they work, and what has been the roles of government and of industry and of the public.

CHAIRWOMAN TANNER: Mainly though, Dr. Stephens, we'd like to hear how you plan on implementing this program.

DR. STEPHENS: Okay, I'll run through this very quickly.

CHAIRWOMAN TANNER: All right.

DR. STEPHENS: A few comments about two of the systems. Specifically, I think they relate to some of the comments that have been made here. With respect to the Danish system and to the quantity and percentage of waste which can be focused towards alternative technology, the Danish system is organized and focused

towards all hazardous wastes which are generated in the country, not just 40 percent. The system has been operational for about eight years now. It is operated interestingly...or it's initiated interestingly by local authorities. It is managed by local authorities. It is run by a private concern. And it is overseen and regulated by the Federal Environmental Agency. It serves all aspects of the economy - agriculture, industry, and the public, through their hazardous waste. It has some particular, unique features in that (1) all waste is targeted for treatment. Greater than 80 percent of this waste is recovered at least for its energy content. The energy is put to use in heating. And I'd like to just as an aside say that Denmark has a very high standard of living, a very competitive economy, and in the time that I've spent in Denmark, there is a considerable amount of consumer products which are used, which are not put out of business by the existence of a very ambitious and advanced waste treatment facility. The other example I think that may be even more applicable to the California situation is that in France, because France is a larger and more diverse country about the same size as California, very diverse industry and economy. France has established 15 treatment centers throughout the country. Each one has been tailored to the needs of the region based on their waste generating characteristics. Each one is privately operated. Each one was established by private capital. However, government played a key role in the establishment of those centers. The key role was the establishment of a government subsidy which actually was kind of an imaginative way to get the facilities established. The subsidy is programmed to be reduced at five percent per year so that within 14 years, the

subsidy is gone and the facilities are fully operational and fully operated by private capital. The point that I'd like to make about these systems, and I could go on and on about the various specifics of systems throughout the OACD countries, is that alternative methods of hazardous waste do exist. The technology exists, the systems operate, and they appear to be economically viable in their considerable operational experience. It's interesting to think though about first of all, why did this happen? And why does it appear in some, but not all. But in some particular European countries, do these apparently advanced waste management systems exist, and why are they operational. And I think one, in my perception of visiting these countries, they're really two basic reasons and they both apply directly to California. One of which is that Europe and Japan which both have populations of high density, land is considered a scarce resource, and it is very much protected. The corollary of this issue is that in California, we don't have that high density population; however does that mean that we can be more wasteful for land? The second answer to this question is that what I would call the "Love Canal Response." The list is very long, whether it's in Holland, or in Sweden, or Tokyo in Japan. They've all had horrendous problems, which are straining the resources of each country to deal with, and almost in all of these cases, the landfills were constructed and operated according to acceptable practices of the time. And now we're dealing with problems which stretch the national resources of these countries to deal with. Now I think the decision has been made by the countries, by the citizens of these countries that this can no longer continue. The decision was expressed through their

government representative to create the institutions, so this happened.

CHAIRWOMAN TANNER: Dr. Stephens, I think we recognize that here in this state. I don't mean to cut you short on that, but we do recognize that there is that need. What we're concerned with are some really positive or some clear answers. Is it possible? Don't you have considerable background for instance on the permitting on applications? I thought Kent mentioned four. I thought there were a large number of applications.

DR. STEPHENS: There are more, there are more than that.

CHAIRWOMAN TANNER: How do you intend to process these applications?

DR. STEPHENS: There are two things I want to respond to. One of which, and I've already said enough in previous hearings about the commitment of the department towards this program. You know that we are committed to this program and there is a lot of nice sounding words that have been said.

CHAIRWOMAN TANNER: And things are happening, aren't they?

DR. STEPHENS: And things are happening.

CHAIRWOMAN TANNER: Good.

DR. STEPHENS: With respect to some of the specifics, I think a lot has been said already about mechanisms of the implementations. There are some specific things which the department needs to do. We are the permitting agency. We are the regulatory agency. The key issue is the permit issue. I would like to have Dr. Storm who heads my Alternative Technology Section to make some specific comments, but I would also like to say with respect to

permitting, we intend on going through deregulatory processes for permitting. It seems to me the question is resources in focus. I've created a special unit within the permit section whose responsibility will be to follow and sherherd the alternative technology facilities so that they will not drop between the cracks, and the various other problems which have happened in the progressive issuing permits. We have established the Interagency Coordinating Committees, the task force which Kent Stoddard already discussed. Within the department and when it comes to our responsibility, we have four permits that identify a unit whose responsibility it will be to see that these permits flow through.

CHAIRWOMAN TANNER: You know, the reason that I'm asking this question and I'm sure the reason there are questions being asked is because in the past, there have been laws that are on the books that certainly haven't been implemented. There have been some grand ideas and this is an ideal situation if we can eliminate the need for a landfill. That's wonderful. But there have been not only suggestions and ideas but there have been laws that have passed, and those laws haven't been implemented. We hope that this is a plan that is workable and not a plan that just sounds good on paper, and is a very idealistic plan but something that is workable. That's why I'm asking questions like this.

DR. STEPHENS: I think we're dealing with both the grand planned aspects and the nitty-gritty details.

CHAIRWOMAN TANNER: A question from Mr. Elder.

ASSEMBLYMAN ELDER: Dr. Stephens, you indicated two things are the principal major factors with respect to why European countries are doing this. You mentioned the Danes and I

don't know what else.

CHAIRWOMAN TANNER: France.

ASSEMBLYMAN ELDER: You say you visited 14 facilities.

DR. STEPHENS: Fourteen countries, I said.

ASSEMBLYMAN ELDER: Fourteen countries, that's quite an extensive tour. How long were you gone on this 14 country tour?

CHAIRWOMAN TANNER: This was before he was in there.

ASSEMBLYMAN ELDER: You brought this to the job?

CHAIRWOMAN TANNER: Yes.

ASSEMBLYMAN ELDER: Okay, good. That's it.

CHAIRWOMAN TANNER: We don't have too many trips.

ASSEMBLYMAN ELDER: Did it occur to you that there is a difference in the energy cost that might relate to the impacts here. I mean you have a "Love Canal" response and land density, but you did not mention the energy cost differential. Don't you think that's a contributory factor in terms of the economics? Now you said that this thing is economically viable, but viable, but isn't gasoline $2.50 a gallon in the countries you mentioned, as opposed to our price here. And wouldn't that change substantially the economics here in California if that were the case?

DR. STEPHENS: Well, first of all, energy costs in Europe and Japan are becoming very close to what our are here. They're still higher in Western Europe. However, I think we're talking about a...

ASSEMBLYMAN ELDER: You mean our are coming closer to theirs, don't you.

DR. STEPHENS: Isn't that what I said, our are coming closer to theirs?

ASSEMBLYMAN ELDER: No, you said theirs are coming closer to our. Are theirs coming down? Is that what you are saying?

DR. STEPHENS: No, it doesn't make any difference the way you look at it. They're coming closer together. With respect to if you do an economic analysis based on energy recovery from waste, you can get a higher benefit in a higher energy cost economy, so that would affect us. There has been an economic analysis of these alternatives of all waste management schemes done under OACD, I didn't do that. I'm not an economist. But as I indicated and as Kent has said, that comparing incineration, for example, even with energy recovery of waste solvents as compared to inexpensive landfill, it's still more expensive whether you have high energy cost or low energy cost. The economics would be more favorable in a place like Denmark which has high energy cost.

ASSEMBLYMAN ELDER: So the energy costs you feel are an effect.

DR. STEPHENS: Certainly they are.

ASSEMBLYMAN ELDER: All right. And since they are so much more, it could be that it would be marginal.

I think you said you feel that these things are true. Have you done cost benefit analysis, running out all these costs for things of the future?

DR. STEPHENS: No, we have not done detail...

ASSEMBLYMAN ELDERS: So there is no specific documentation as to your feelings on this?

DR. STEPHENS: That's correct. I would like to respond to the question about the European systems and the energy costs.

I'm sure it's a factor as you suggest, although in none of the literature that I'm familiar with on European systems has that been suggested as one of the major motivating factors that have moved these countries towards development of better waste technologies. They've had severe problems as Doctor Storm says, and I honestly don't feel that the energy implications are a major or even a principal motivating factor.

ASSEMBLYMAN ELDER: So land is the big thing.

DR. STEPHENS: And the dangers that I think that the bad method of disposal represents.

ASSEMBLYMAN ELDER: Thank you.

DR. STEPHENS: You see one of the real difficulties doing this economic analysis is what it costs to put on landfill.

ASSEMBLYMAN ELDER: But there hasn't been any done, right?

DR. STEPHENS: That kind of economic...well the comparative analysis. Then there's been economic analyses on the various waste management systems.

CHAIRWOMAN TANNER: I think we're getting off the point of how the department plans on implementing this and we do have a lot of witnesses.

ASSEMBLYMAN ELDER: It's a deep subject.

CHAIRWOMAN TANNER: Yes, and we could go all day on that one questions.

DR. STEPHENS: Okay, what I'd like to do now is to ask Doctor Storm who is heading the section on Alternative Technology to address some of the specific activities in that section which have been created to implement this particular program.

CHAIRWOMAN TANNER: All right. That would be good. Doctor Storm. Thank you, Dr. Stephens. Would you identify yourself?

DR. DAVID STORM: Yes, I'm David Storm and I'm Acting Chief of the Alternative Technology and Policy Development Section within the Health Services Department. As Dr. Stephens pointed out, this section will be responsible for carrying out most of or much of the responsibility for implementing the Alternative Technology Program that's currently being put together for the state, and also for continuing a number of the activities that we're involved in right now. The section is made up of currently about 20 scientists and engineers and will be very heavily technically oriented providing technical input that will be needed to carry out such a program. A major segment of that program is the California Waste Exchange which is currently in operation and is being expanded considerably right now. Last year the exchange succeeded in turning around 17,000 tons of hazardous waste with a staff of about one and a half persons, and it is being scaled up so that by the end of this calendar year, we should have about five persons. And we would hope that the actions of that exchange in program we will be taking will contribute considerably to implementing or encouraging more reuse of hazardous waste. And this is one of the programs where we do reach out quite a bit to the small waste generator. Our major target is the small generator and we do concentrate on them. And much of the waste that we have turned around has been from the small generators.

CHAIRWOMAN TANNER: You plan on enlarging that program?

DR. STORM: Yes, we will. We do have some statutory

authority there in that we have the authority to contact waste generators and ask them for justifications to why they're disposing of a waste that appears to be recyclable. At the same time, we'd provide them with lists of commercial waste recycling firms.

CHAIRWOMAN TANNER: You haven't done that a great deal though in the past?

DR. STORM: We've been doing it for about the past two years, and the quantity of waste which we have recycled with that approach has been steadily increasing. It doubled from 80 to 81. In the area of alternative technologies, we're going to be involved in a number of things and I think that Gary Davis did go over or at least illustrate many of the things that we will be taking on over the next year or so. I think that one of the most important things that we'll be doing in the long-term, and we're just starting to gear up for that, will be what we could call an industrial outreach program. And extension of our resource recovery program where we will be responsible for basically continuing what OAT started. Gathering information about waste stream data, who generates it, what companies, and reviewing alternative technologies that are available for recycling hazardous wastes and providing that information to industries, especially to the small generators, providing technical consultation and information for them to encourage them if they don't have the resources by themselves to get together hopefully in cooperative ventures to try to turn around the wastes that they are currently taking to disposal sites, either through development of treatment facilities or pooling their wastes so that there is sufficient quantity to recycle. The lack of quantity oftentimes is a deterrent for a specific company to

recycle their wastes.

CHAIRWOMAN TANNER: Dr. Storm, how about the smaller companies? If we increase the disposal fees and if an alternative method is more expensive than the landfill, how can we encourage them or discourage them from illegal dumping. How can that be done?

DR. STORM: Well, I think admittedly we are walking a fine line, and that is going to be one of the more difficult tasks to develop a policy and approach that will help and encourage the small generator to recycle their waste. And I think really what we're looking at is the pooling of waste. We've got to encourage the consolidation of small quantities of waste such that we have enough to recycle. At the same time, we're cracking down and increasing our enforcement efforts. I don't have any hard and fast answers I don't think at this point except that one of our major thrusts is going to be getting out there and providing help and information to the small generators.

CHAIRWOMAN TANNER: And that will be costly though, won't it? And we have no money to spend.

DR. STORM: It will be to some extent, but we...I think that one of the major mechanisms that we're going to use is our automated data system which we have not had in the past. I think we're fairly optimistic and excited about that approach. We simply have not had that in the past and have not been able to get at that kind of information quickly and consolidate it and examine it, and see who is disposing of what, and where it's going, and get back to those generators and help them. I think that is a very cost effective approach, I think using the computer. It's basically

the kind of work that a computer should be doing instead of staff. So I don't think that will be too costly. I think where the cost will come in is in the staff time and resources needed to actually meet with generators - the sales job, if you want to call it that, and encouraging them to use alternative technologies. And, of course, if legislation such as SB 810 comes along, that will certainly help things considerably and immensely, I think. Without that, it would be more work for us, but with 810 it would help. In addition to that kind of outreach program, the section is going to be responsible for developing policies. I mean they technically are into policies and strategies and actions that we'll need I think to encourage alternative technologies. We don't have all the answers and I don't say that we do right now. I think we've got some basic concepts as to what will work. We've been told, I think, for quite a few years by the regulated community that as long as there is the cheap disposal alternative, there is not going to be much treatment and recycling in California, and the state is going to have to do something if it's going to happen? So that's what we're trying to do. We're looking at even considering bringing in an outside party, a contractor to look at the state's approaches and perhaps helping us develop our policies. Maybe we need somebody from outside to look at what we're doing, an expert in this kind of policy development and there are these kinds of firms to guide and provide us with some input as to what might be the best approaches. Another thing that we have just...

CHAIRWOMAN TANNER: I think industry would be very helpful. I think that they would provide technical advice.

DR. STORM: Yes, I think they will in that area. Also,

we've just created a technical advisory committee made up of not only members from the regular community but academia, environmental groups and agencies to help us develop policies and approaches to doing this. So we're kind of in a formative stage right now, trying to get our act together and to get the pieces put together so that we're looking at this in long-term. The department is not looking at this as a quick fix. We plan to be around for awhile, and we want to develop an approach and strategy that's going to endure through the coming years.

CHAIRWOMAN TANNER: How do you feel about this proposed schedule for the phase-out, the time schedule? Do you feel that it is a possibility?

DR. STORM: I think that what we know right now,based on the permitting times and everything, it's workable, but I think that we have to get going fairly quickly as far as permits. We have been told that if things happen fairly quickly, it's reasonable. But again I think that we have open minds at this point. If we're convinced that it's not going to be workable, we'll hopefully amend it as needed. And the regulations that we will be putting together will hopefully address these kinds of issues.

CHAIRWOMAN TANNER: Those regulations then will be...I am interested in how the phase-out will be enforced. If there is a feasible and economical alternative method, then how do you plan on enforcing?

DR. STORM: The concept right now is there would be a schedule identified, and there would be the provisions for extension of that deadline in very severe hardship cases. As far as enforcement, it would require, I think, at the time or before the

time of the deadline if everything looked like it was falling into place and there were facilities beginning operation at the land disposal facility, permits would be amended such that they would not be allowed to accept that kind of waste. But that wouldn't happen unless something was available.

CHAIRWOMAN TANNER: Until there is something available?

DR. STORM: And the target was definitely going to be the date of the ban. There is some possibility or thoughts about having reverse movement of this schedule if somebody comes on early and has something going in that certain area. Perhaps the ban would be accelerated. I think we have to really explore the workability of that and the legality of that in regulation form, but that can be put into a regulation. That is a concept that we would like to put in because it would encourage, I think, waste managers to move fast, those who want to move fast and get something going before a ban.

CHAIRWOMAN TANNER: Thank you very much, Doctor.

DR. STORM: Thank you.

CHAIRWOMAN TANNER: Next we will hear from Jon Steeler, who is a member of the National Conference of State Legislatures.

MR. JON STEELER: Thank you. I would like to briefly, because I know everybody's getting a little bit touchy about time here, go over the report that we did for your committee and for the Office of Appropriate Technology on what other states are doing to encourage alternatives for the land disposal or hazardous wastes. We were asked to examine states other than California, their existing state laws and regulations, proposed legislation, and other innovative proposals that encourage alternatives to land disposal.

CHAIRWOMAN TANNER: This is your report, isn't it?

MR. STEELER: Yes. I think the committee members have it.

CHAIRWOMAN TANNER: Go ahead, Jon.

MR. STEELER: I'd like to briefly summarize that report and provide an update on implementation of some of the state programs that are comparable to the Governor's Executive Order and Senate Bill 810. The strategies states have used to encourage alternatives include financial strategies, legal strategies, and institutional strategies. Financial strategies include fees, tax incentives, bonds, grants, things like that. As far as fee structures go, which the Executive Order includes, there are a number of ways of doing this - fees based on the volume of waste generated, gross receipts of specific types of facilities, excise taxes based on disposal cost, things like that. These fees can be used to encourage one management option over another. For example, in Missouri, two fees were imposed over the last year, and this was one on landfills and one on generators. The one on landfills obviously was to discourage the use of the landfills, and the one on generators was used to discourage the production of hazardous wastes. Original projections by the agency and by legislative staff thought that they were going to bring in about $500,000 a year based on the amount of waste that was generated in the state. However, over the last year, the landfill fee has brought in only $10,000 and the generator fee between $70,000 and $110,000. This is basically due, at least this is what the agency and the staff feel, to an overprojection on the amount of waste produced in the state. Just the mere existence of a regulatory program and then an increased use of waste reduction techniques. And they feel

that to a certain extent, it has been a success in encouraging waste reduction methods. Another approach is the use of tax incentives. This obviously offers a positive inducement to encourage alternatives to landfilling, other federal tax incentives, including investment tax credit and energy tax credit. There are a number of state tax options. One is property tax exemptions. Another one is accelerated depreciation. I believe SB 810 has a section on the use of accelerated depreciation. North Carolina has had this in effect for a year and no one has used it. There hasn't been any use of the accelerated depreciation up to this time. Another approach is state tax credits. For example, Oregon provides a 100 percent tax credit to industry through pollution control facilities which produce a useable source of energy or other items of real economic value. Another approach is the use of bonds, industrial development bonds for resource recovery, waste reduction, or treatment equipment. As far as legal strategies go, there are a number of options. One is a definitional exclusion to provide incentives by excluding certain materials or facilities from the entire regulatory program. There are obviously a few problems with this in that its uncertainty is that whether or not a certain material is regulated, prevents an agency from tracking and control of waste management in the recycling end of it -- and in some cases is inconsistent with the federal regulations, at least as they now stand. Another possibility in this area is full or partial permit exemption for various types of waste management facilities. Again this would be used for resource recovery or on-site waste recovery or whatever the targeted facility would be. There are obviously problems with this. It also prevents the

agency through a certain extent from tracking and monitoring waste management techniques at these types of facilities. Another approach which is found in the Governor's order and which has been discussed here is fast-track permitting, or streamlining the permitting process. This would be done for specified targeted or specified facilities. For example, in Minnesota there is a three-year planning process and state designation of landfills and a one-year planning process in private initiation for treatment facilities. In Kentucky, landfills must get local government approval, whereas treatment facilities only need the agency permit, thereby getting around local objections of the facility. However, I would like to note that neither state has established a treatment facility with these yet. Other suggestions include simplifying the review process for certain types of facilities or designating priority projects. Obviously problems with streamlining are difficult for full-citizen participation. There is a burden on agency staff for these targeted facilities, and there is an adverse effect on the review of other projects. The other one that's been talked about here at great length is land burial restrictions, and I'd like to spend a little bit more time on this. I have a list of states and of what they're doing in the area of land burial restrictions. I'd like to pass those out. Obviously outright burial bans on specific types of wastes is the most easy way to go. For example, in Arkansas the agency requires that all high hazardous wastes are incinerated. And it put the burden of proof on industry to show that this is not technically possible to incinerate it. In Illinois, SB 171, which was passed in the fall, establishes a date after which there can be no more land disposal. And

it also places the burden on the generator to show that it's not technically or economically feasible to ban or to use an alternative technology on these wastes. Most of the things in this area have put either technical or economically feasible language into their statutes or regulations to determine whether it's possible to ban the land disposal of the waste. Really nothing has been done in this area. In Arkansas, they haven't permitted any new facilities.

CHAIRWOMAN TANNER: It's going to be a problem all over the country, isn't it?

MR. STEELER: Yes. There have been very few new facilities sited over the last two years. There has been one -- a Dow Chemical facility in Michigan. A couple of facilities have received expansion permits in New York only after they made a real effort to show that there were going to be alternative technologies used at the facility. I believe there is going to be a speaker from New York who probably can answer that more fully. A less severe statement...

CHAIRWOMAN TANNER: Jon, we have a long list of witnesses and so if you could quickly...

MR. STEELER: I'm almost done.

CHAIRWOMAN TANNER: O.k., go ahead.

MR. STEELER: Another approach is institutional approach and this is through the use of changes, which is used in California; research and development programs for small businesses, which is used in Illinois and has been working; and state ownership, which I don't think any state is really

too thrilled with. And in conclusion, I'd like to say although no state has implemented all of these policies, between the Governor's Executive Order and SB 810, a number of the available policy options are being considered in California. And, in fact, because of these efforts, I know a number of states have come through me and have contacted California to find out what you're doing in this area and acting as leaders essentially in the area.

CHAIRWOMAN TANNER: What state is most successful in their program, do you find?

MR. STEELER: It depends on what area. Alternatives, I think California has come as far as anybody in actually getting anything done.

CHAIRWOMAN TANNER: And maybe we'll get more done.

MR. STEELER: I hope so.

CHAIRWOMAN TANNER: Thank you very much. Our next speaker will be... witness will be Peter Skinner, who is an Environmental Engineer from the New York State Attorney General's Office. Mr. Skinner, you understand that even if you just go over your report and sort of give us a summary, we will put the entire report in the...

MR. PETER SKINNER: Most certainly. I can see that you're interested in moving along here, since I was number five out of 30. It's going to be a long hearing and I'll certainly be very brief here. I have a copy of my full testimony, which goes on for 13 pages and takes about 31 minutes to read. Needless to say, I won't do that. Who do I give it to?

CHAIRWOMAN TANNER: Thank you. You give it to us and the Sergeant will bring it up.

MR. SKINNER: I come from what I think is the home of landfills and perhaps be very, very brief and open it up to questions. Because I bring with me the best interest, of course, of the Attorney General of New York, Robert Abrams, and a good deal of experience with hazardous waste management and landfills and I would be happy to entertain any questions you have. I'm a licensed engineer in the State of New York. I work in the Attorney General's Office putting on cases for environmental litigation. I have five other professionals on my staff. We work on a variety of different issues from the SST, to plutonium transport and Nuclear Power Plant Decommissioning. Of course, Love Canal takes an inordinate amount of our time.

CHAIRWOMAN TANNER: You have looked at the OAT Report, have you?

MR. SKINNER: Oh, I certainly have. In fact, I helped Gary try to line out some of the outline of what that was... what I hoped it would look like. It was about two years ago, I think it was. I felt that the report goes a good long distance towards what I think is appropriate, but I think it may be a bit conservative. Our experience with hazardous waste management...

CHAIRWOMAN TANNER: A question here, I'm sorry.

ASSEMBLYMAN WRIGHT: On that point, you know we've had Love Canal thrown out to us as a reason why we're going forward with our program. I've heard so many times about Love

Canal. And since you are from New York, I went to a seminar that was held by the Solid Waste Management Board in which there was a doctor and for the life of me, I cannot remember his name, from Massachusetts who gave us some insight as to what exactly happened at Love Canal. Now my understanding is that it wasn't a case of illegal dumping or bad management, but it was a case of a developer coming in and removing the cap that had been placed there and actually the dump site was pretty much like a bathtub. And it was the rain that causes it to rise up and overflow. Now you're familiar...

MR SKINNER: I think you've asked a very good question, and that's a question, of course, that will be answered after years of litigation. Being part of the litigation team, I think it would be really inappropriate for me to discuss that. I'm sure that Joe Hiland, who's in the private sector, can probably answer the question without any restrictions associated with being a litigant. But I think it is important that you raised the question of bathtubs, because that's what my testimony talks about. Many of the landfills around New York -- we have over 400 of them -- and we've got a lot of experience, have suffered from this bathtub affect. What happens is, and this is true by the way, with today's state-of-the-art landfills. I'm not talking about the Love Canals, which were built in 1947. I'm talking about Love Canals that were constructed in 1975, supposedly state-of-the-art facilities utilizing the best engineering judgment and design that you could come up with at the time. And they filled up with leaching, and

they cost many, many dollars to dewater. They haven't been successful at dewatering and, at the same time, the cost of managing that leaching is getting out of hand. That's only one basic problem with landfills. I think the OAT Report goes into some of those but New York has suffered every imaginable insult from landfills and the OAT report only goes into a few of them.

For instance, some of the problems that we are beginning to face now are the problems of subsidence. Subsidence is the phenomenon of the roof falling in and, because of this problem of the roof falling in, so does the rain fall, so does the snow melt, and so this bathtub fills up and it overflows. We had that problem at the West Valley Nuclear Fuel Processing Plant, where the radioactive leaching just came right on out and on down into the streams. And we pumped out millions of gallons from those trenches, spent hundreds of thousands of dollars trying to cover them up, only to have them fail again.

In fact, I was at a legislative hearing earlier this year, and the Department of Environmental Conservation indicated that they nearly lost one of their regulators down a subsidence hole while they were touring the site. Now I think this is a rather significant problem we're looking at. We're not looking at a little bit of infiltration here. We're looking at a major problem, and a problem which can be so easily avoided.

I guess I'm really glad to see the kind of questions that this panel is bringing up. I don't hear any questions

about aren't landfills capable of mitigation, can't we engineer something better? But I think the short answer is that the engineering can improve, but it's really going to be a short-term improvement of a long-term menace. I think we really concentrate not so much on improving an obviously inappropriate technology, but facing up to the problems of the future and in developing incentives and implementation plans to achieve the kind of goal that we all think is appropriate. And, I think one of the things that this program, this OAT program, has over, and I know I sound like a salesman here, but this program is a rational program. I come from New York where we are proposing a ban that I hope will pass on Monday of next week, just a blanket ban. No implementation program. No rational hearing approach. We're just saying we don't want things in the ground. We've had so many problems with what we've had so far. We just don't want it to happen and, if industry can't come up with their own approach, then they can go out of state.

CHAIRWOMAN TANNER: Don't you feel, because I certainly get the feeling that industry is very anxious to find other methods, that landfill in the long run is their concern about it because of the future liability problems?

MR. SKINNER: Well, I have two things about that and it's a very good point. Recent data here in the state, we don't by the way even have as good data about the generation information, but if three percent of high priority wastes being disposed of on-site and the huge balance of the rest is going off-

site, I think the generator is trying to tell you people something. We don't want the liability of this high priority waste on our site. We'd like to transfer it to a third party, who, by the way, is usually relatively assetless. We'd like to transfer that liability to them and let them worry about it. And, let's face it folks, what's really going to happen is the taxpayers are going to have to do it.

CHAIRWOMAN TANNER: Not in California, they don't.

ASSEMBLYWOMAN WRIGHT: Who paid for you to come out here. OAT?

MR. SKINNER: I really don't know.

MR. STODDARD: EPA did.

MR. SKINNER: EPA did.

MR. STODDARD: The EPA paid for Mr. Skinner to come out today.

CHAIRWOMAN TANNER: That's good. I'm glad you're here.

MR. SKINNER: So I think really my statement goes into a whole host of horrors associated with landfilling. We've had it happen not just to Love Canal. Love Canal really was a particularly bad situation, bad because of the site, bad because of a number of different management techniques utilized. But the problems that I really want to focus on, and I did so in my statement, are the problems associated with the state-of-the-art type landfills. The same landfills caught on fire in New York and we had to go put out our landfill and fill it with leaching because of the operation of the fire trucks.

Problems like this are just gross problems. We're not talking about problems that are second generation. For instance, I think one of the problems that you should all be aware of is the Earthline Facility in Illinois. Hazardous Materials Intelligence Report of January 29 has indicated that this state-of-the-art secure landfill has now leaked dichloroethane in a concentration of 360,000 part per million. That's 10 feet away from the landfill. That's supposed to be in clay, which is absolutely impermeable, and I think these kinds of clear indications of problems are something we really have to face up to as a reality and should be one of the major incentives to push industry forward.

In New York State, we had two very long hearings about some state-of-the-art facilities for hazardous waste management. These hearings focused, of course, on the appropriateness of landfills. One of the facilities was denied ... excuse me, both facilities were denied its permit because for three secure landfills in question there was no long-term management plan in place to move toward state-of-the-art facilities to destroy the waste. And I'm sad and happy in a way that the permits were granted, but they were granted after the two companies in question came forward with massive 10-year implementation plans for state-of-the-art destruction technology. And we, of course, are hopeful that that's going to be part of our answer.

But, another part of the answer, of course, is forcing the private sector doing on-site treatment to come

forward and build their own facilities. General Electric, for instance, has moved forward very strongly with help and aid from the state with a state-of-the-art kiln and that is located just north of Albany, and I think you should all go up and take a look at that, because not only had they undertaken...

CHAIRWOMAN TANNER. They don't have a committee, do they?

MR. SKINNER: Not yet. It's close by and you can visit the beauty of New York.

ASSEMBLYWOMAN WRIGHT: On paid expenses by the State of New York, right?

MR. SKINNER: No, maybe GE would do that. But at any rate, I think you have to recognize that the State of New York is moving forward. I don't think it's moving forward with the kind of rational program you're proposing and, I think if this program goes forward now, you can look forward to hopefully a limited impact on your land and water. Which, by the way, having flown here from an area where the groundhog can't even find the surface to look for a shadow on this green countryside, I couldn't see putting hazardous waste in that anywhere.

CHAIRWOMAN TANNER: Thank you very much. I appreciate it.

MR. SKINNER: You're welcome.

CHAIRWOMAN TANNER: I'm going to call on Peggy Sartor next, because Peggy has to leave. And I suppose everyone else is going to send me up a note that they're going to have to

leave.

MS. PEGGY SARTOR: I don't know how you knew that, but I was sitting here worrying about getting home tonight because I have to attend a City Council meeting, which is one of those urgent things that we all have to do. I also want to tell my friends up here this did not come off the Capitol grounds. I just don't want to end up in jail.

I want to say thank you, Madame Chairman, and all the members of the Committee for the opportunity to express a couple of my concerns and I, too, will be brief, and I will send you a revised copy of my total thoughts. I think my personal concerns reflect pretty much the concerns of most of the elected officials at the local level, and primarily those who are the executive committee at SCAG.

We have from the very beginning been concerned about the recycling, reclaiming, reductions, dewatering, detoxifying, and all the other words which go with waste handling other than landfilling. However, we've also recognized that it's a two-prong effort that we are going ahead with our siting committee study. There are many, many things happening very rapidly and we are going in both directions at the same time. I really want to say that we probably reacted out of the fear for all of us for the air, the water, and the management of our land because we saw the quality of life deteriorating and we got scared and we reacted to panic. And partly because we were concerned about the earth and we saw it slipping away from us, we may have overreacted. I really believe that that

period of fear has put a burden on the industries on which we depend for the jobs that we have to have to support ourselves. What I'm seeing now is so refreshing that in the last three or four months, primarily the last four months, I have had almost a rejuvenation of my enthusiasm for the hazardous waste product that we are coming up with. I was almost to the point where I wanted to step aside. I felt that I was wasting the only life I have running around to meetings which really were not getting anywhere.

CHAIRWOMAN TANNER: Visiting dumps.

MS. SARTOR: Visiting dumps and all the other things. I do feel that we have seen something happening. And I'm very glad that it is, because it is so essential. There is no way we can walk away from it. You, particularly, have to face up to a responsibility for handling the waste or it will be unmanageable.

CHAIRWOMAN TANNER: I have a question, because of a lot of questions directed to what would local government do in this program, for instance. Do you think local governments of the cities or counties would accept new facilities even if they weren't landfilled, treatment facilities, transportation? Do you think that you people who are organized and studying the problem could convince other people in local government that they are going to have to respond to that and be given that responsibility to handle it.

MS. SARTOR: There are so many answers to that. For some people, yes there would be a response that says yes, we

recognize it. Particularly those that are involved in industry, particularly the generators who recognize that their employees are part of the community. Those people who are concerned, yes. I think the average elected official would run like hell, and I say that because of the response that I've had from most of them who will publicly say we need local control and we want to do it our way, and then secretly tell me, don't bring it up, Peggy. I've got to run for reelection and I think this is typical.

CHAIRWOMAN TANNER: A question from Assemblyman Katz.

ASSEMBLYMAN KATZ: Does Victorville produce any toxic...

MS. SARTOR: Yes. We have three cement plants. One was inside the city limits, two on the perimeter. We have George Air Force Base, which is adjacent, and it also is a generator. We have other industries and we're bringing in new industries all the time.

ASSEMBLYMAN KATZ: And what do you do with the waste?

MS. SARTOR: At the present time, we depend on BKK for that which is transported, but it is Class I. Some of it is still being held on site. I think this is one of the things that we're going to have to recognize. More and more is being held on site than we are aware of. I believe I was asked a little while ago, where is a lot of it going? We don't know for sure where some of it is going.

ASSEMBLYMAN KATZ: Would your City Council vote to site a treatment center inside your city?

MS. SARTOR: No, because we don't have enough square miles, but we have been looking at the adjacent area.

ASSEMBLYMAN KATZ: Nobody ever does, believe me.

MS. SARTOR: No, we just happen to be a small city, but we have been looking at an area adjacent and our supervisor is talking about a new town to be established out in the wide open spaces on Bureau of Land Management property, which would be turned over to the public sector, and it has been rumored that possibly this is one of the things we're talking about. I don't know whether it would be acceptable or not.

CHAIRWOMAN TANNER: Is that a major...

ASSEMBLYMAN KATZ: Would you support it?

MS. SARTOR: I would want to have all the facts before I answered that question.

ASSEMBLYMAN KATZ: Local government is wonderful.

ASSEMBLYWOMAN WRIGHT: You're darn right they are.

MS. SARTOR: That's called survival. I would like to make a point and I really feel very strongly about this. I sometimes think I'm a broken record because I keep saying liability is a hairy monster and I recognize this. I have been working very closely with some of the people in industry toward a goal that I would like to see completed, while I'm still on earth, of establishing a waste treatment facility transfer station in the Inland Empire. Because I see the industrial center changing drastically from a large field manufacturing community to one of many facets, and there are many ways that we can go towards establishing a treatment facility. I've had

the utmost cooperation from the industry and the very best of cooperation from the people in government, at all levels -- from the very local level up. But it has been a matter of starting at the top and talking with those people who are the regulators and getting a feeling first that it would work, then going to the local government and telling them I've got the approval of the top level. What can you do? When the jobs are at stake, I find they are much more cooperative and this is one of the things we're working on.

I have also, and I'm going as fast as I can, because I appreciate your getting me in up here, had a kind of feeling of appreciation for the staff people at OAT, and I want to say this publicly because some of us had to be converted, particularly in our area. There are many people who say that government is a problem, and you know about the three great lies. I'm from the government, and I'm here to help you, which is only one of them. But this has been the attitude. The other two are: the checks are in the mail and, of course, I'll marry you. I really feel that it's important that I think that because we have had this new enthusiasm and I want to give a lot of credit to Dr. Harvey Collins because I think that his sense of balance in many instances helped us keep an open mind when others were trying to see only one track. Kent Stoddard and Megan Taylor have earned an enviable reputation among some of the most skeptical people in Southern California. And they had to earn it because they came into a situation where everybody is from Sacramento. Hold off! But they have done a fine

job and I really feel that the concern that most of us have is what's going to happen when these two people have been replaced by others. Will this same spirit of cooperation...

CHAIRWOMAN TANNER: Are you going to offer them a job?

MS. SARTOR: No. We're fearful because the spirit of cooperation we see is so essential that we would hate to see it lost. I'm going to skip the rest of it because I would just like to say that we need to finalize waste management plans at the local government level. This is the answer that I think we're going to have to do it and I don't see the money for it. And I see all the excuses in the world coming forth as why we have no money. But I have also seen some creative thinking in the field of, particularly the staffs on how we can manage it. And if we recognize the fact that we're all in it together, the cities are not fighting the county on it, neither of us is fighting the state, and the industry and government have to work together in order to make it work. Thank you.

CHAIRWOMAN TANNER: Thank you very much. Joseph Highland, who is the Director of the Environmental Defense Fund for Toxic Programs, will be our next witness. And he's taking the same plane.

MR. JOSEPH HIGHLAND: I actually do have to fly back to Washington, and I appreciate the opportunity to be reporting today. I have been for the last six and one-half years with the Environmental Defense Fund. I currently hold the position with Princeton University as the Director of a Hazardous Waste

Project. But the perspective that I would like to offer you comes from my extensive experience over the past several years working on the whole hazardous waste problem, from trying to get passage of federal programs, which would be designed to guide future disposal and clean up past problem sites, to working with local communities. I have traveled across the country from Love Canal to Springfield, from Michigan to Memphis, Tennessee, literally to dozens of sites where past improper disposal practices primarily from landfills have resulted in severe impacts on environmental quality and human well-being.

Against this background, I've judged the state's efforts in moving to reduce land disposal, toxic wastes, and encourage you to use some other technologies. And I believe this effort should be applauded and I strongly support it, because it does establish a framework for better waste disposal in the future. To minimize the risk of an inherent environmental quality and threats to public health that will maximize the use of safer alternative technologies to disposal from landfills. And will encourage the development, I think, of still new and as yet undeveloped approaches to minimizing waste production in increasing waste reuse and recycle, and safer waste disposal.

Let me briefly, and I realize that you asked us to be brief, try to support my position. I believe our past experience with landfilling of hazardous waste has been nothing short of disastrous in terms of environmental quality, and its impact on the quality of life. One need only to travel to

sites such as Love Canal or Bumpus Cove, Valley of the Drums, Stringfellow Quarry, Bridgeport, New Jersey, or Memphis, Tennessee, to see firsthand how inadequate land disposal techniques have resulted in widespread environmental pollution and in some cases the perception and in other cases, actual adverse impact on human health. The residents of Love Canal, who were mentioned earlier, certainly didn't know when they bought their homes that they were living adjacent to a dump site and their school was built in part on that site, and they didn't know until those chemicals surfaced and contaminated their environment. People whose children go to the Shannon School in Memphis, Tennessee, didn't know their kids were playing on a former hazardous waste landfill as a playground until a man reported walking his dog in that area and watching the dog go into convulsions and die shortly after digging in the dirt. Whether or not the dog died of exposure to toxic chemicals that had leaped from that site and surfaced is unknown. But sampling subsequent to this accident demonstrated presence of chloradane, one of the highly toxic pesticides that concern levels of several hundred thousand parts per million.

These and other examples, which I could give you vividly, demonstrate the potential problems from land disposal of hazardous waste. Landfilling is not a technology that effectively disposes of hazardous waste. It eliminates it from view for at least the present time. It does not effectively treat them or inactivate them so that they won't cause problems in the future.

Many chemicals that have been disposed of in landfills have exceedingly long lives; that is, they will be around for decades or centuries. In addition, they often migrate out of the site, contaminate ground and soil the waters. The potential for movement in soils and waters is still not well understood, but we know that significant environmental contamination has occurred.

In a report issued last year about this time, the President's Council of Environmental Quality presented the result of the survey, which showed that over 2,800 wells throughout 18 states in this nation had high levels of volatile organic chemicals in water taken from those wells -- levels far in excess of surface waters and levels of concern. We know that the chemicals can migrate in soil, that they can reach into surface waters.

One only need look at the incident in Alabama with DDT, which was disposed of in a landfill and reached into soil and subsequently into surface waters and contaminated nearby streams that people have relied upon as a source of protein in their fish. Those people have recently been found by Disease Control to have the highest body burdens of DDT ever reported in this country. So our past experience with landfilling has been poor and the question then should be raised, why should we accept this technology today, why should we not try to limit its use in the future.

Let me state clearly that I agree with those who will argue that a landfill constructed today is likely to be

better in many ways from ones built in the past. However, let me stress to you that I do not believe we can say with confidence today that a landfill constructed under the current best available practices won't pose significant environmental and public health problems in the future. For that reason, I support the effort under way in California to seek alternative methods of waste disposal rather than rely so heavily on land disposals.

Why do I believe that landfills today will not give the security that we wish they would or perceive they might? First, we don't have a government framework that effectively controls hazardous siting of new landfills, the design of new landfills, or their operation. In over five years since the passage of the Resources Conservation Recovery Act, we still don't have regulations that help us in the design of landfills. The state here has a laudable goal of complete protection for all time, but I would suggest to you the scientific evidence that I'm aware of does not show it that we can...

CHAIRWOMAN TANNER: May I ask you a question?

MR. HIGHLAND: Yes.

CHAIRWOMAN TANNER: Do you think that some of the regular laws may be weakened by the present administration? I don't mean that the political...

MR. HIGHLAND: But it's a very straightforward answer. The current laws that were promulgated previously, many have been suspended. Laws which were supposed to be out, which were promised during the last six months, have again

been delayed. EPA is currently in court once again seeking to delay promulgation of standards, which would tell us something about either the design or performance standards of the new landfills. Those are still not out. They've been the subject of court litigation for over four years. It seems to be besides the failure to have a government structure, which is realistic in guiding us towards the design of such landfills, we have two important findings.

CHAIRWOMAN TANNER: I wonder if you can sort of try to wrap it up.

MR. HIGHLAND: Yes, I will. Let me touch on two issues. One is the belief or the representation that clay used as a liner would be impervious to organic chemicals or to metals that might seep through it. It figures if 1/10th of a minus 6, 1/10th of a minus 7 centimeters per second migration rate are often used to convince one that if one had 12 or 18 inches of clay, essentially you would have a secure landfill. Recent word both out of Texas A&M and other institutions clearly show us that clays can be adversely affected by the migration of chemicals or the exposure to chemicals, making them much more subject to the migration out of the landfills. And I guess it's the best demonstration for the fact that neither clay nor synthetic liners are capable of withholding wastes or containing wastes. There is a last study that I'd like to share with you, which comes from Princeton University.

CHAIRWOMAN TANNER: And then we will have to close.

MR. HIGHLAND: Right. That study looked at four landfills, all constructed in the last five years, all double-lined landfills, all made with the best technologies available. The first landfill, built by Monsanto Chemical Company in Gloucester County, New Jersey, has 18 inches of clay as a primary liner, with 12 inches of clay as a secondary liner. It receives many of the chemical wastes, such as toxic metals, of concern to you here, and which you might preclude from disposal in this method. Operation of the landfill began on August 17, 1978, and the first detection of leaching breaking through the primary 18 inches of clay occurred only eight months later in March of 1978. The next site is a Dupont site with similar history. This time it only took two months to go through the two liners, both 30 mill nylon reinforced liners -- the same for the next two sites.

I won't waste your time to give you the details. The point simply being that we do not have currently the technology to give us quote "a really secure landfill." Our current experience, our past experience unsupported, and I think it's critical to move in a direction which minimizes the waste of land -- minimizes the use of landfills as a waste disposal technique.

And, therefore, I applaud the effort here. I think it's pioneering to go forth in this direction. And I think as you mentioned in light of this current federal stand is to pull back and put your head in the sand. It's critical that it take place and go forward with your support. Thank you.

CHAIRWOMAN TANNER: Thank you very much. I appreciate your being here. Nancy Manners, who is a member of the West Covina task force on BKK landfill. Nancy, if you can just make it short.

MS. NANCY MANNERS: If it's five minutes, that will be a lot.

CHAIRWOMAN TANNER: O.k., thank you.

MS. MANNERS: Ny name is Nancy Manners and I am a resident of the City of West Covina. I served as Chairman of the 1980-81 Los Angeles County Grand Jury that studied the subject of hazardous waste management. We made an in-depth study of all the facets of all the problems connected with the disposal. And we presented a series of recommendations to the Board of Supervisors, which are detailed in this booklet, which I'd like to leave with you. I will not be reading it, of course, but I do want to touch on one recommendation or group of recommendations that we made that touches so closely to what we're talking about today. In fact, I think that we went probably further than what is being proposed today and maybe more drastic in one sense.

One of these recommendations deals with encouraging industry to develop and implement alternative means of toxic waste disposal, alternatives to land disposal, and to aim towards the eventual reduction to a very minimum of our reliance on the landfill as a method of disposing of it.

We suggested three things in that regard: to establish specific deadlines for development and implementation

of alternative means of toxic waste disposal by various means, which I won't detail, so that the ultimate residue is reduced to the lowest technological level possible; two, to encourage industry to develop that technology to meet such deadlines by offering either tax credits to those who do or penalties to those who don't; and, three, to require a new industry to demonstrate the technology capability and willingness to reduce toxic waste to a minimum before such industries are allowed to begin production.

I think that goes a little further. I will not talk about the other recommendations. I would like to leave them with you. I'm also a member of the City of West Covina's BKK landfill Transition Task Force, which is attempting to address the local problem with the only operating Class I landfill in Southern California. Two letters were sent to you on January 28th and 29th by the Subcommittee Community Representative that I sit on that Task Force and one to the Mayor of West Covina. These letters express clearly how we feel concerning the Governor's program to ban disposal of six high priority wastes from landfill and the implementation of the alternatives to hazardous waste disposal as prepared by OAT.

CHAIRWOMAN TANNER: We received those letters and they'll be in the records.

MS. MANNERS. Right. Good. That's all I wanted to... I believe my concerns are shared by officials of the city, by residents of the city, and I will be brief in saying

that the Governor's ban and the program to make the transitions to the use of advanced technology to treat hazardous waste, we feel that these are not idle pipe dreams, that this transition is underway right now, that the technology for such a transition is available and ready to be implemented.

One such facility is already being scheduled to be operational by early 1983, and will be capable of treating almost 60 percent of all hazardous waste in Southern California. Furthermore, it is a transition that we believe can be made economically competitive. Any undermining and delay of this effort by the state will create an advantage for the producers of these wastes at the expense of the citizens of West Covina, which is having to receive 80 percent of the waste generated in Southern California.

Ladies and gentlemen, I want to tell you, I want to let you know that the mood of many citizens of West Covina is rather ugly on this subject. As the concerns and the emotions run high, we have lawsuits, we have recalls, we have bitterness, we have turmoil, because the residents living near that area resent the fact that West Covina is becoming the dumping grounds of Southern California. It is morally and socially wrong to continue to expect the city of West Covina to accept virtually single-handedly the responsibility for the proper management and disposal of hazardous waste in Southern California and beyond. Industries producing this waste must be made to assume their proper responsibility. Further delays will not make it any easier. In fact, the problem

becomes more acute daily and answers must be found immediately. If the industries cannot or will not assume their responsibility voluntarily, then we must take more mandatory methods.

We have attempted over the last three months to gain the cooperation of the waste producers by urging their participation in our task force meetings, and we continue to get the response that they will not attend because of pending litigation. But this litigation does not pertain to these waste producers. It only pertains to the BKK Landfill. I cannot help but believe that these industries are merely using this as an excuse to avoid cooperation in a resolution of this problem. Instead they are working to kill any actions that are taken to resolve the problems. By this stance, they not only are not facing reality, they failed to realize that cooperation at all levels of government and industry is necessary and is imperative to meeting the challenge of this enormous problem for California.

CHAIRWOMAN TANNER: I think, perhaps, you overlooked that industry was very much involved in this program.

MS. MANNERS: Let me retrack and say some industries. My experience as the Chairman of the 1980-81 Grand Jury Study on Toxic Waste, my experience as a member of the Grand Jury, as a member of the City of West Covina Transition Board, and as a citizen and longtime resident of this community, lead me to the conclusion that the only way out of this dilemma is a rapid transition to advanced technology

in the processing and treatment of waste. To reduce it to the smallest possible proportions and to give up our reliance on the land as a proper disposal for vast quantities of toxic materials, chemical waste producers must come to accept and become committed to the use of this technology and to do their part in resolving the problems they helped to create.

Therefore, I strongly support the Governor's program and the report prepared by OAT, and urge that this Subcommittee take whatever actions are available to implement these programs and as soon as possible. And I thank you for your courtesy.

CHAIRWOMAN TANNER: You're welcome. This is not a subcommittee. This is a full committee.

MS. MANNERS: Sorry.

ASSEMBLYWOMAN WRIGHT: May I ask a few questions?

CHAIRWOMAN TANNER: I thought you were in a hurry.

ASSEMBLYWOMAN WRIGHT: There are three questions I wanted to ask. How long has BKK been in that location?

MS. MANNERS: Well, BKK has been in the location since 1963, but they hadn't accepted a toxic waste material until about 1973 or '74.

ASSEMBLYWOMAN WRIGHT: When did that housing tract go in that became so concerned about location of hazardous waste?

MS. MANNERS: Well, some of it was there much before, and some have moved there since. I see what you're driving at.

ASSEMBLYWOMAN WRIGHT: I'm not driving... I'm trying to get some information in regards to...

MS. MANNERS: I don't have all the details on that. Our Planning Director is here but, generally speaking, some of it was there before and some is there since.

ASSEMBLYWOMAN WRIGHT: Do you feel that if the consideration was that indeed this site was to receive whatever was the residue from some alternate technology, do you think the people would still be as concerned as they are now? Do you think it's just the fact that it's a landfill site, period?

MS. MANNER: Naturally, nobody likes it that much to tell you the truth. But what they really object to, and what they're really concerned about, is the toxic consideration. I think that they would not be objecting if they knew for sure that there was no problem. They've been assured by the State Department of Health often that it does not present an immediate problem, but that's not assuring to them. That's not enough. So they don't like it. They are satisfied now to close it to toxic waste disposal, and they are not talking about closing it to solid waste or...

ASSEMBLYWOMAN WRIGHT: One more question. If there was an appropriate technology process available and was going to go into that particular site, do you think the people in that area would be acceptable to it, because it would still be the toxic material coming to that point?

MS. MANNERS: Do you think that after all this time

and after 10 years of litigation and argument and worry that the people would be receptive to that at this point? I think you're expecting a lot of the citizens of West Covina.

ASSEMBLYWOMAN WRIGHT: That's what I'm asking you, because I also have...

MS. MANNERS: I feel that in that case, because of what they've gone through, I think that with proper education and with the background that, you know, coming clean -- I think that the people can learn and can agree that this might be a good thing, but I think the climate in West Covina at this moment is not conducive.

ASSEMBLYWOMAN WRIGHT: Because we do have a Class I and Class II landfill site in my community, Simi Valley. And one of our concerns has been there is the fact that Ventura County does not want to take Los Angeles County.

MS. MANNERS: It is not an easy thing to resolve, and which is what I came to realize when we did the study and almost like Peggy said, I almost wanted to throw up my hands and say what's the use.

CHAIRWOMAN TANNER: Assemblyman Katz has a question. Are you finished?

ASSEMBLYMAN KATZ: Cathie asked the question.

ASSEMBLYWOMAN WRIGHT: I'm sorry.

MS. MANNERS: Well, thank you very much.

CHAIRWOMAN TANNER: Thank you very much.

MS. MANNERS: May I leave this here for you?

CHAIRWOMAN TANNER: Yes, please do. All right.

Bryant Fischback, who is a member of the Office of Appropriate Technology Advisory Board, will be next.

MR. BRYANT FISCHBACK: My name if Bryant Fischback. I'm with Dow Chemical Company and I served on the Technology Assessment Advisory Committee for the report on Alternative to Land Disposal of Hazardous Waste that's being developed by the Governor's Office of Appropriate Technology. I'm a chemist by profession and have been practicing as a professional chemist for 32 years. My purpose for being here this afternoon is to provide this committee with some background and perspective on this report in my capacity as a member of that Technical Advisory Committee.

When I was asked to serve, I inquired of the project director as to the purpose of the assignment. I was assured that the purpose of the Advisory Committee was to provide technical assistance in the development of a report that could be used by waste generators as an assessment manual, which would indicate what alternative technology or hazardous waste were available and which might be applicable for certain types of waste. This would allow a generator to assess his/her waste disposal practices and consider applying an alternative practice. In fact, the agenda for the first advisory team meeting referred to the document as, and I quote, "A Handbook of Preferred Technology for the Reduction, Recycling, Treatment, and Destruction of hazardous Waste," unquote.

With this goal in mind, I willingly agreed to serve on the Advisory Committee. I totally agree that reducing dependence on landfill disposals is appropriate. Three committee meetings were held and I attended the first two, March 10th, and April 15th, 1981. I was not able to attend the third and final meeting in early July, as I was out of the country at that time. I was disappointed to find that the bulk of the report had changed. I was totally unaware at any time and no effort was made to advise me during the time I served on the committee that this report would ultimately be used as a basis for a state-mandated program, seeking to ban six classes of so-called high priority waste from landfills. Had I been aware of this from the outset, I probably would not have agreed to serve on the committee without receiving an adequate assurance that the scientific integrity of the data it generated would never be compromised. I'm on record as disagreeing with the report in three major areas where my recommendations were never accepted nor to the best of my knowledge even addressed. These areas are what I would call, first, the technical inadequacy of the report; second, the arbitrary mandate.

CHAIRWOMAN TANNER: Question from Mr. Katz.

ASSEMBLYMAN KATZ: Just a question I'd like to get cleared up. We heard earlier testimony by the Director of OAT that there were no dissenting opinions in terms of the advisory committee, and that people were given the opportunity to withdraw their support of the report or not have

their name published on a report, and that nobody took that opportunity. This seems to be a little bit of a conflict.

MR. FISCHBACK: Yes, that was done. We received a copy of the executive summary prior to the report issued. I received a copy of the report some very few days before the Governor made his Executive Order known, and we had never had any advice or knowledge that that was going to take place. And, therefore, to take our name off of the report, we were not given enough time to review it. I don't think we would know that there would be a state-mandated program emanating out of that at that time.

ASSEMBLYMAN KATZ: You were not given an opportunity to go over the report section by section for editing or clarification?

MR. FISCHBACK: Oh yes, and we sent that in in July, late, late in July, but we didn't know what the outcome of that was and so just a few days before the Governor gave his Executive Order, the total report was issued to us.

CHAIRWOMAN TANNER: But you knew about the report? We're trying to get at that. You knew about the report and what was in the OAT report?

MR. FISCHBACK: No, we had sent back our comments on the OAT report in July and we did not receive the total report until after the 1st of October, and the statement came out on the 13th of October by the Governor, the Executive Order. Therefore, the time between that was very short between the time we got the total report and the time that

we did receive an executive summary prior to that time to look over.

CHAIRWOMAN TANNER: I'm not...

ASSEMBLYMAN KATZ: I wonder if maybe there could be a point in clarification with Mr. Fischback. It's not clear whether or not he feels that the final report was substantially different from the draft document that he provided comments on and I have his comments. This seems to be important...

CHAIRWOMAN TANNER: That's the question. I think that's the question that we're trying to...

MR. FISCHBACK: I will get into that where I differed with the report and where it was not changed. First, the technical inadequacy of the report, second, the arbitrary mandating of alternative technology and, third, the issue of unjustifiable banning of certain classes of waste landfills, and I'll restrict my remarks to just those three subjects.

With regard to the technical inadequacy of the report and the draft of the final report, which I received in mid-July for comments, I pointed out quite a number of technical errors, misrepresentations, and questionable statements. Examples of these are listed in Appendix 1 that's attached hereto. This leads me to a major area where I disagree in principle with the report. Simply stated, this is that the report of the document based on a limited literature survey with totally inadequate reference citations appearing at the end of the chapter. There is no

way to determine which citation goes with which statement, yet the statements are assumed and declared to be facts. As had been pointed out, some of the assumptions are scientifically erroneous and, therefore, completely unqualified to serve as a basis for a state-mandated program requiring use of alternatives to landfill disposal. Such a report should have been the result of full research with complete reference citations placed directly in the text followed by a peer review. Legislative and regulatory actions should follow sound scientific data, not precede them. Put another way, the cart and horse metaphor. The moving force for regulation should be sound scientific, technological and economic data which have undergone the scrutiny of peer review. Advisory Committees such as this one on which I serve do not accomplish this in-depth scientific input nor adequate peer review.

My secondary major disagreement is in the area of the arbitrary mandating alternative technology. I was careful to point out at our committee meetings that the use of alternatives should not be mandated unless there was an overriding health and environmental consideration at stake. The method of how to treat or dispose of waste is generally the result of a business decision and is properly not in the purview of the legislator or regulator unless there is an overriding threat to the public health or the environment. I was laboring under the impression.

CHAIRWOMAN TANNER: May I ask you a question?

MR. FISCHBACK: Yes.

CHAIRWOMAN TANNER: Those six categories that were defined by Mr. Davis, would you say they are not a threat, toxic enough to be a threat to the health...

MR. FISCHBACK: Not as classes, but individual materials in those certainly are, some certainly are... alternatives would be preferred.

CHAIRWOMAN TANNER: Isn't that how they based, the Governor based his mandate on the potential danger of those...

MR. FISCHBACK: Yes, and I think that to do that by classes is inappropriate, and I'll get into that in just a moment here.

MR. STODDARD: Could I point out, Mrs. Tanner, that the Governor's Executive Order did not do anything by classes. It only said highly toxic materials and left it up to the department as part of its regulatory process to make that determination.

CHAIRWOMAN TANNER: Why don't we let the... why don't we, Mr. Stoddard, allow the witness to testify.

MR. STODDARD. I'm sorry.

MR. FISCHBACK: I was laboring under the impression that the report was designed to allow the question, have you considered this alternative which seems to work for others with your type of waste, rather than that one's management plan necessarily has to consider prescribed alternative technology. How does the Department of Health Services know better than a manufacturer what business decisions should be

made regarding the use of alternatives? What if a company develops technology that is superior to that prescribed? Can the state legally and constitutionally deprive this company of the right to use the fruits of its research? If alternatives do become mandated by law, then the liability resulting from the use of the mandated alternatives should rest with the Department of Health Services. Is this department prepared to accept such a heavy responsibility?

Finally, I would address the third area of disagreement; namely, the Office of Appropriate Technology's recommendations to initiate immediately hearings on a prospective ban of so-called high priority waste from land disposal. I strongly object to the assertion made by the OAT staff that there is a need "to present waste streams as a recognized list of suspected bad actors which deserve special attention in the search for alternatives to landfills." I made the same objection to some constructive suggestions in a letter to the staff, which you attached with other relevant correspondence on this issue as Appendix 2. The report uses a broad approach to justify classes of material being labeled as high priority waste. For example, the last sentence on page 123 states that halogenated organics are also extremely persistent. This is patently untrue for all halogenated organics. Methalene chloride, for example, is rapidly biodegradable in a climate of sewage system. Again, on page 131 in paragraph 4 of the report incorrectly states that "halogenated organics of the general class are considered inappropriate for land

disposal because of the toxicity and persistence in the environment of many of the compounds of the class." Guilt by association is no criterion on which to ban whole classes of materials from landfill disposal.

Secondly, placing a broad class of waste on a list of suspected bad actors creates a strong bias against each waste in this class. Even though many of these do not constitute a hazard to public health or the environment, it is grossly unfair to create such a bias against any material unless there is, first, sound scientific evidence to support the conclusion that the material does indeed pose a threat to public health or the environment. I have a problem with bans. This is an extreme action and should be exercised only in places where very adverse human health or environmental conditions are documented scientifically on a case-by-case basis. A last resort for only very good sound scientific reasons.

Lastly, in fairness to the Office of Appropriate Technology staff, I wish to state that a significant number of my disagreements were addressed and changed. In some event I contend that what was originally intended to be a technical report to aid in alternative technology decision-making, has been issued as a rather political publication designed to be the basis of a state-mandated program. In this regard, I feel my efforts on the advisory committee were misdirected.

CHAIRWOMAN TANNER: I guess this is sort of a personal comment. Wouldn't you assume that the, I mean I could assume that the Office of Appropriate Technology staff

was as serious about what they were doing as you were, and that they were perhaps doing the same thing, had the same thing in mind. There is no way that they can decide for the Governor or for the administration what he is going to do with that report and...

MR. FISCHBACK: That's where I probably have the rub, as you've heard.

CHAIRWOMAN TANNER: So, but whether you disagree or agree with the Governor... I would say, to the report itself, except those few areas where you could feel that there's some technical errors or maybe some distortions or...

MR. FISCHBACK: Well, how we proceed from here based on the report, of course, was very important.

CHAIRWOMAN TANNER: Thank you very much.

MR. FISCHBACK: Thank you.

CHAIRWOMAN TANNER: Are there any questions? Our next witness will be Michael Belliveau, who is another member of the board.

MICHAEL BELLIVEAU: Good afternoon, my name is Michael Belliveau. I was a member of OAT's Technology Assessment Advisory Committee and I'm also a Research Associate with Citizen's For A Better Environment, with offices in San Francisco and soon in Los Angeles. We have been active in critiquing the state's hazardous waste program for nearly two years now, and we happen to be here today with some more positive comments. I'd like to offer my perspective as a participant in the advisory committee. I felt that the Office

of Appropriate Technology put together a committee which had very broad representation, broad interest, and a great degree of expertise. We had three monthly meetings. There was ample opportunity provided to give direction to development of the OAT report. We were provided with extensive written materials on which to comment both in writing and during the meetings, and I felt that OAT was very responsive to the committee's concerns at the meetings and many of these concerns were corrected and the written materials were changed. I'd also like to quote from a letter of another committee member who couldn't make the meeting today. That was Dr. Selina Bendix, President of Bendix Environmental Research, Inc., an independent environmental consulting firm. In a letter to this committee she says, "Staff of the Office of Appropriate Technology appeared genuinely interested in input, took extensive challenging questions well, and fostered intensive discussion of document draft text. Many portions of the text of the report were literally discussed sentence by sentence to make sure that statements were technically accurate and unambiguous. I have never seen government staff so open to input from an advisory committee. The committee members rewrote many key portions of the report." I felt that the OAT report, which did result, was well researched. The references which were included in the report were quite extensive. With the assistance of the work done by U.C. Davis, much data was provided, which had been absent in the past, on quantities and types of hazardous

waste disposed of offsite in California. The first-time compilation of this data alone makes it an invaluable document. Oftentimes I've heard industrial representatives calling for a classification of waste based on degree of hazard, and I think that the OAT report makes an initial step in that direction by defining high priority waste and proposing to develop regulatory actions which address the degree of hazard of that waste. I thought that the review of technologies that were included in the report was very comprehensive and there was a very positive emphasis on recycling hazardous waste, specific waste streams when possible, opportunities that industry could take to reduce the amount of specific waste stream right at the source and also technologies for actually treating and detoxifying the waste.

Another value of the report, itself, is that it's a document that represents a piece of work that is science for the people. What I mean by that is that there are many people who don't have a very strong technical background, who are involved in decision-making, who are involved as citizens concerned about hazardous waste issues, who need guidance on what is available, and what the hazardous waste situation is in California, and I think that report serves that purpose very well.

CHAIRWOMAN TANNER: Question, question Mike.

MR. BELLIVEAU: Yes.

ASSEMBLYMAN ELDER: Question. Are you still...

from what you just said, it sounds like you are, yourself, technically vague. What is your specific background? Are you an economist, chemist, engineer, social scientist? What is your background?

MR. BELLIVEAU: I have a Doctor of Science degree in Environmental Science from MIT. I'm in a master's program in Environmental Management currently.

ASSEMBLYMAN ELDER: So you are then, have been involved in studying this particular phenomenon in academic setting and your degrees go along with what we're talking about here.

MR. BELLIVEAU: Yes, I do have some background in environmental chemistry and have been involved in hazardous waste issues in California for almost two years.

ASSEMBLYMAN ELDER: From your background here, one might think that you're kind of someone who happened on the scene. This is what you do as a professional?

MR. BELLIVEAU: That's correct.

ASSEMBLYMAN ELDER: O.K.

MR. BELLIVEAU: I also wanted to make a point that the recommendations and conclusions of the OAT report were extensively discussed at the third and final meeting of the OAT committee. There was general agreement among the members present that the conclusions and recommendations were well founded, and there were no major objections to the final report expressed at that time. A complete draft report was circulated to the committee for written comments at their

discretion, and these were mailed into the Office of Appropriate Technology.

ASSEMBLYWOMAN WRIGHT: Excuse me. Starting on that point, when did you receive your draft copy? The gentleman before you said he received his in July.

MR. BELLIVEAU: I think Bryant was referring to the final draft.

ASSEMBLYWOMAN WRIGHT: The draft in which you would have made any comments or any request for changes. Would that then be around July?

MR. BELLIVEAU: The second meeting was April 15, the third meeting, I believe, was July 9th or, I don't know the exact date, but I think we received the draft for written comment either at the third meeting or shortly after the third meeting. Perhaps, it was shortly after the second meeting. Do you have another question?

ASSEMBLYWOMAN WRIGHT: I have just one more question following along that line. I want to be sure that everybody on that committee had the same time frame. You got your draft copy around July so you could make your comments on it and send it back. Did you ever see a copy wherein you could have seen whether you had your changes incorporated in the study?

MR. BELLIVEAU: Yes, as the meetings proceeded, we were handed sections of the report. We've received initially a draft outline, a draft, and a bibliography. We received draft introductions along the way. We...

ASSEMBLYWOMAN WRIGHT: Then you received your final copy around the first week of October?

MR. BELLIVEAU: I can't say the exact date on which I received the final copy. We received a draft copy much earlier than that. Before the report was released to the public as final, we received a final copy in the mail for our last perusal, as I recall.

ASSEMBLYWOMAN WRIGHT: Do you have the time and if you want to withdraw your name from being a member of the committee, you had time before it was released, did you not?

MR. BELLIVEAU: Certainly not, I didn't see any reason to do that. My understanding of the purpose of the report initially was that it would be a document that would be used by decision makers. It would be used by hazardous waste generators. It would be used by the public basically as a document that would have a widespread audience and be in a language such that it would be easily understandable. I think it carried out this purpose quite well. My understanding of how the report would be used ultimately was that the results including the recommendations would be forwarded to the Governor's office and it would be at the discretion of the Governor's office to take action on the recommendations, and at no time were we led to believe that OAT knew what the final action taken by the Governor's office would be. I think it was independent of their project. It was spoken to quite well by Peter Skinner and Joe Highland. The benefits that would result from reducing dependence on land disposal.

CHAIRWOMAN TANNER: Mike, you're going to have to wrap it up.

MR. BELLIVEAU: O.K. Then I would just like to perhaps address a couple of points that were raised by Bryant. I have to take issue with what is this dependence on sound scientific judgment as it's been presented by the American Industrial Health Council and other industrial representatives. I believe that sound science most certainly has to be used to make judgments as to regulatory and policy decisions, but I think it's unconscionable to wait for the body counts when you're dealing with hazardous and toxic materials issues. I think that if there's a reason to suspect a hazard, that that hazard, that suspicion, quite often wants some regulatory action. I'd also like to quote once more, and then I'll wrap it up, from Dr. Bendix's letter because she has extensive experience. She served five years on an EPA toxics advisory committee and in her letter she says, "Yes, some regulatory mistakes will be made through action before all the facts are in. I think that it may be 50 years before we have a significant percentage of the information we ought to have to write really good laws. We can't wait that long. We must be flexible enough to modify laws when new evidence justifies changing them, and I think that the one very positive aspect of the implementation program for the OAT report is that it is very flexible. It provides generic and case-by-case variances to exclude certain waste types, certain disposal types from the regulatory program, and I would urge the

legislature, the public, especially industries, to all work together and cooperate through the regulatory process to develop a workable program whose benefits we've heard expounded upon quite well today." I'm open to any questions.

CHAIRWOMAN TANNER: Thank you very much.

MR. BELLIVEAU: Thank you.

CHAIRWOMAN TANNER: Paul Cambern from the Western Oil and Gas Association will be our next witness. If the witnesses do extend their testimony, we'll be here much past the dinner hour I'm afraid, so...

PAUL CAMBERN: I have nine pages, which I will...

CHAIRWOMAN TANNER: You will not make it.

PAUL CAMBERN: As a written hand-in.

CHAIRWOMAN TANNER: Fine, thank you.

MR. CAMBERN: I will try to cut it short and just hit a few of the high points.

CHAIRWOMAN TANNER: I appreciate that.

MR. CAMBERN: My name is Paul Cambern and I'm employed by Chevron as a Senior Environmental Specialist in the waste management area. I'm appearing here today on behalf of the Western Oil and Gas Association, which is a trade association representing most of the companies that conduct the petroleum activities in the State of California. The Association would like to thank this committee for giving us this first public opportunity to comment on the Governor's Executive Order, and on the report on Alternatives to the Land Disposal of Hazardous Waste. You can imagine our

surprise when we saw in the report that the petroleum industry was listed as one of the major generators of these high priority wastes and, yet, we have never been approached to serve on the committee and had no opportunity to input into the report. Once again, we'd like to thank this committee for giving us this opportunity. I am going to skip most of my material and try to get to just the high points because there are a number of other speakers.

I'd like to just start with what I think is the one key point, and like to say that we believe that it's possible to locate, design and operate all types of disposal facilities, and that includes land disposal facilities, in a safe manner. However, it is not an easy job. We recognize this, but we think it can be done. The SCS engineer's report, which was jointly sponsored by the Office of Appropriate Technology and the EPA, clearly shows that currently operating off-site landfills in California are considered safe and have not been responsible for the problems identified in the OAT report. In fact, the OAT report admits that none of California's existing sites have been implicated as sources of off-site groundwater contamination. We think it's important that we look at the whole problem of landfills, not what went on 40 years ago or 30 years ago, but what is there today operating in California. We recognize that there are questions about the long-term safety and integrity. However, based on our existing statements in the OAT report on the existing sites, we don't understand why the rush pell mell to force alternatives, and

we're quite concerned that it will be done too hurriedly and it can result in more problems than benefits and, in this regard, I'd like to say that the Western Oil and Gas Association has retained a consultant to come here today to testify. This is Mr. Paul Zimmerman of the Tera Corporation. He spent over 11 years in all aspects of the waste industry, high tech, low tech, everything and, at this point, unless there are some specific questions about the oil industry, I'd like to turn it over to him, because I think what he has to say is of great interest.

CHAIRWOMAN TANNER: All right. That would be fine.

ASSEMBLYWOMAN WRIGHT: In regards to the oil industry, what do you feel if you had an appropriate alternaitve today, what do you feel would be the time span before you could come on line to use it provided it was economically feasible?

MR. CAMBERN: Well, let me make this comment. I understand that for a brand new rotary kiln that if you had it designed, you knew exactly what you wanted, and you ordered it today, there's like a two-year waiting period to get it delivered, and that's just the equipment procurement aspect. That doesn't address anything about the permitting, the market studies of what wastes are available. It's a tremendously complex problem, and I can't imagine building any new facilities within one to two years and even the simple facilities. Any other questions?

CHAIRWOMAN TANNER: Yes, I do. I was wondering,

are you, is Chevron or the Western, what is it? Are you doing something within your own company to...

MR. CAMBERN: Several of the companies are located... We don't approach it from an alternative viewpoint. We approach it from what is the proper disposition of the waste. What is the best in any regard? And we have research people looking into alternatives. Some of them are the ones mentioned in the OAT report. Some of them are not mentioned in the OAT report. Quite frankly, it concerns me right now that we're dedicating research effort in an area that is obviously in a state of flux, and I'm wondering if we're not doing research in something that the state is going to ban, and maybe we should redirect that effort into some other area.

CHAIRWOMAN TANNER: Do you recognize that the public is -- you heard several people who represent local government, that local government and the public is very reluctant, in fact, absolutely opposed to landfills and they are fearful of landfills. Do you recognize that?

MR. CAMBERN: I recognize that. I also point out that many of the alternatives in the OAT report are not alternatives. They're pre-treatment prior to landfilling, so there are many wastes that are still going to end up in a landfill. They may be pre-treated first, but it's still going to a landfill, and that is the only option available for some of the waste.

CHAIRWOMAN TANNER: Got a question?

ASSEMBLYMAN ELDER: Are you saying WOGA has not done

an alternative analysis with respect to these various products, particularly, petroleum waste?

MR. CAMBERN: Not as a trade association. Many of the individual companies have. I think one thing you'll have to realize is that most of our waste is crude oil and we expend tremendous amounts of dollars to go out and find it, and we certainly are not going to be throwing it away. We're looking very hard at how to recover this crude oil and other oil from waste streams, and many of the -- I might point out that I believe the OAT report was based on manifest information which often does not contain the composition or concentration of the waste element and I would point out within Chevron, when you see us send out an oily waste, it's probably 80 percent water, 20 percent or 19 percent solids, and one percent oil. It's a generic name that's been in the industry for years and it's not truly descriptive of the wastes.

CHAIRWOMAN TANNER: Thank you very much. Mr. Paul Zimmerman will then be our next witness.

MR. PAUL ZIMMERMAN: Thank you. My name is Paul Zimmerman and I'm employed as Manager of Waste Management Services for TERA Corporation in Berkeley, California. I've been retained by the Western Oil and Gas Association to review the Office of Appropriate Technology's recent publication on the Alternatives of Land Disposal and Hazardous Waste.

CHAIRWOMAN TANNER: Can you tell us what TERA Corporation is?

MR. ZIMMERMAN: TERA Corporation is a professional services and systems engineering organization. I've had over 11 years of experience in the commercial waste management field with two of the major firms in the United States. As an introduction to my comments on the OAT Report, I would like to emphasize that I believe it's vitally important that any regulatory program directed towards hazardous waste management be developed on a sound, technical, and analytical basis. Each step of the program will stand or fall on the strength of that activity. Based on my view of the OAT Report from related publications in my experience in the industry, I've two major concerns that I would like to express at this time about the report.

First, it is my opinion that the OAT Report fails to establish the need to ban the land disposal of hazardous waste in California. Secondly, I believe that the analysis of alternative technologies presented in the OAT report are insufficient to support OAT's findings that the alternatives are feasible, safe and affordable, at this time, and, therefore, do not establish an adequate foundation for the first step in California's newly announced hazardous waste management program. One of the most important points that I think should be made in this report is the fact that the report uses the terms "land disposal" and "landfill" interchangeably. This is not so. The term "land disposal" encompasses a wide spectrum of waste disposal technology and practice and, although it includes landfill disposal, it is

certainly not synonymous with that term. Included in the state-of-the-art type land disposal practices are surface impoundments, landfarming, and underground deep-well injections. Land disposal methods of whatever form employed are...

CHAIRWOMAN TANNER: Maybe you could just describe briefly those various land disposals.

MR. ZIMMERMAN: Those other types of land disposals? Sure.

CHAIRWOMAN TANNER: Just very briefly.

MR. ZIMMERMAN: I have written them out on a paper which I will leave for you to be incorporated as part of this. Surface impoundment is a disposal process whereby waste materials are retained within an engineered impoundment area to provide for evaporation of liquids, protection from runoff, or transport off-site, security from access, or temporary storage pending further treatment.

Under injection is a process whereby wastes are injected into reservoirs deep within the ground, well below the areas of useable water, and these reception areas are generally saturated sands or very porous rock, which have void space available for storage of this waste material.

Landfarming, on the other hand, is a process whereby wastes are either injected or plowed into disced soils where they are allowed to biodegrade through a series of aerobic and anaerobic activity in conjunction with ultraviolet light. And the heavy metal cations, which might be in these wastes, are then restrained through the exchange

capacity of the soil much in the same manner as a water softener might do to remove undesirables.

It's important to assess the various land disposal options on their own merits rather than denounce land disposal in a generic sense. I think that each of these are different and separate, and each applies to different and separate types of waste and they should be evaluated on their own merits rather than denouncing land disposal in a generic sense.

It's quite inappropriate to extend the conslusions of the SCS Report to all forms of land disposal for the reasons mentioned earlier in my statement. Each land disposal option must be examined on its own merits, in a particular application. Land disposal options should be retained as alternative treatment regimen, since in numerous instances there are no alternatives to the landfilling of some industrial sludges.

I will be offering an example of filter cake, which contains metal hydroxides. It would be senseless to incinerate these materials and oxidize them to metal hydroxides to have to go through the process again of electricstatic precipitator and a high energy scrubber to again reduce them to the insoluble state before they go into the landfill as a **filter** cake, from there to incinerator.

The last point concerning the discussion of land disposal in the OAT Report is the problem associated with land disposal of waste materials cited in several portions of

the document, with instances of groundwater contamination and overflow being among the worst cases. The OAT report clearly indicates that these failures precede the promulgation of regulations in the state and that no failures to date have been noted on any of California's existing Class I disposal sites. This would indicate that the problem was not in the concept of land disposal, but that of siting, personnel, or operational techniques. These considerations are certainly of equal importance in the siting and operation of alternative technologies and are not unique to land disposal methods. It is not proper logic to denounce one alternative disposal technology on the basis of factors which can equally impact the success of others.

To summarize my first point, I do not believe the OAT report demonstrates the need to abandon land disposal, since: the only failures noted in the document admittedly predate design, monitoring, regulation criteria; the merits of each land disposal option were not examined; the OAT report contradicts the findings of the SCS Engineers reports on the risks of secure landfills; and, there is no logical basis for suggesting that the siting and operation of alternatives can be done in a more feasible, affordable, and safe manner than land disposal.

Secondly, with regard to the analysis of the alternative technologies, I believe that the OAT report should be viewed as a first useful step in building a firm foundation for California's hazardous waste management program, but it

should not be mistaken for the technical and analytical framework needed to support regulatory decision-making. It is my opinion that the OAT report is seriously deficient in its analysis of the alternative technologies available to handle California's waste streams. The data and decision provided in the report are insufficient to conclude that the alternative technologies are feasible, affordable, and safe.

The first deficiency is in the determination of the waste volumes. The quantity of waste available for treatment must be known in order to justify the expenditure of large amounts of capital -- in the viability of long-term programs for hazardous waste management. Without such information, it can easily be seen that we could finance and construct major alternative facilities only to find them useless after a short time. To illustrate the importance of that, I'll bring up two of the chemicals that are quite popular in literacy circles today.

PCB's, which were one time used as additives to copy machines, stabilizers in herbicides, and more widely known as coolants in the electrical industry, and 2-3-7-8 TCDD, better known as dioxin, which is a very toxic chemical. To date, there has been a lot of research done as far as selective polymerization of the PCB's to remove it from use of cooling oils. And ultraviolet photolysis in conjunction with thermal oxidation for the destruction of 2-3-7-8 TCDD. However, PCB's are no longer manufactured in this country, and 2-3-7-8 is seriously curtailed as a contaminate, a very small

portion in parts per billion in herbicides which are now in use. It would not make sense to use these various specific technologies and spend large quantities of capital to design facilities to handle these when we're not sure that these particular forms of technology are useful for other organic compounds.

CHAIRWOMAN TANNER: What do we do with those things that are still being stores, those particular chemicals?

MR. ZIMMERMAN: One of the things that is most important and the reason that this is a first step that needs further assessment is that my experience in the waste business is that the waste business, as we see it today, has been very, very heavily weighted by a backlog of waste which has been accumulating for approximately 30 to 40 years. Some of them date from fish ponds and lagoons that were constructed in World War II. Consumer market and manufacturing techniques are changing very rapidly. To spend large amounts of capital on engineering and design, based on information which is so heavily weighted from these past backlogs, would lead to designs which most probably would not be useful in the next five years.

CHAIRWOMAN TANNER: Yes, a question from Mrs. Wright.

ASSEMBLYWOMAN WRIGHT: Do you know of any technology that could basically be zeroed in on, say eliminating the PCB's today, and that it had several probabilities and several possible uses?

MR. ZIMMERMAN: Yes, ma'am. There are many things

that have been used such as molten salt ovens in which the polychlorinated biphenyls were injected for destruction. And I'm not absolutely positive that the selective compound polymerization, which is a very safe and effective method being used now, would not be applicable to other compounds. And you're saying that research has not been done that we know of and we're ready at this point, I feel, to spend the kind of capital required in order to put these things in service.

MR. DAVIS: Madame Chair. I know the technology which is available for PCB's today, which is widely applicable to other ways as well, and that's high temperature incineration. It's being used in Texas and Arkansas to destroy PCB. It's also very amenable for destroying other organic toxic wastes. So the technology would not just be used for PCB's.

MR. ZIMMERMAN: The second of the deficiencies is the definition of the high priority waste that was found in the OAT report. The OAT report on page 57 states that no attempt, as yet, has been made to define lower concentration limits which exempt waste from the high priority designation or to determine every waste stream that meets the definition of a high priority waste, so we do have a gap in designing exactly what kind of quality, quantity, and treatment method that will be used until we do classify those types of waste materials. These statements clearly indicate that the need for additional study and analysis is recognized by OAT and must be done to adequately characterize the quantities and

composition of the waste streams amenable to treatment through the alternative technologies listed. Given that such data are not present in the OAT report, it is not possible to conclude that alternative technologies are in a generic sense feasible, affordable, and safe.

CHAIRWOMAN TANNER: Question from Mr. Elder.

ASSEMBLYMAN ELDER: One of the concerns I have is with respect to the treatment of oily waste water. One of the best uses for oily waste water, frankly, is the reinjection in an oil field in order to aid secondary recovery of whatever oil is in there. In this manner, the State of California is able to recover from the East Wilmington oil field in excess of $400 million worth of oil which goes into the State Treasury every year. Now, are we discussing in here the possible elimination of the ground disposal of oily waste water in an oil field and, if we are, you're talking about $400 million here?

MR. STODDARD: No, we're not at all. We're talking about ending land disposal in all forms, at this point of high priority wastes. I mean you pull oil out of the ground. It would be ridiculous for us to suggest you can't put an oily material of water and oil back in the ground where it came from. We have not ever proposed to do that.

ASSEMBLYMAN ELDER. So as far as... then it would be your position that as far as land disposal and that would be classified in that general category, you're not talking about this type of land disposal.

MR. STODDARD: Not at all. That's not one of our priority wastes. We're not concerned about that.

ASSEMBLYMAN ELDER: O.k., I just wanted to warn everybody because we're already in a budget crunch and the state gets $400 million a year from the East Wilmimgton oil fields and that would come to a grinding halt if you couldn't put the water back in to force the oil. Plus, the ground would sink.

MR. STODDARD: The water is a far sight different from a high priority waste material, which is what we're concerned about here today.

ASSEMBLYMAN ELDER: There are also salt water brines which are...

CHAIRWOMAN TANNER. If you could move along.

MR. STODDARD: Great, thanks.

ASSEMBLYMAN ELDER: The WOGA representative doesn't agree with you.

MR. CAMBERN: This bit about high priority wastes. It's defined by semanticists in their report and it's very difficult to go out and look at a waste stream and see if they mean that waste stream or not. In the discussion paper, they talk about volatile organic compounds, compounds which contain carbon, have a vapor pressure in excess of .1 millimeter of mercury. Oil would fall in that category. Now maybe they don't intend it to, but under their current discussion paper, it's there.

MR. STODDARD: We want to hear those kinds of

comments at the workshops.

CHAIRWOMAN TANNER: Just a minute. This is exactly what I was... What I was about to say is that I think that the value of this hearing is to raise these questions for both people who agree or disagree with the report to be able to communicate and understand that there are questions and perhaps resolve those questions.

MR. CAMBERN: I think the biggest problem I have in evaluating the report is trying to decide what is a high priority waste. It's very hard to understand what they are talking about, which waste streams in California are included, which ones are not. It makes it difficult to evaluate the conclusion in the report.

CHAIRWOMAN TANNER: I would hope that those are questions that can be asked and may be answered through the workshops.

MR. STODDARD: Yes, that's exactly the point I have in the workshops. These are legitimate concerns. We want to hear those. If our categorization is so broad as to include oily waste as a volatile, then we need to change our method, because that's not our intent in that particular case. That's the whole reason we're going out to workshops. We definitely want to hear those kinds of concerns.

CHAIRWOMAN TANNER: And I think that's the value of this hearing.

MR. ZIMMERMAN: Just to wrap it up briefly. I had a problem with the comparative analysis of the alternatives

and the fact that it would seem appropriate that a thorough examination to the risk of trade-offs, benefits, disadvantages and, most importantly, the environmental impacts of all the available alternatives, including land disposal options, be done before this report was made. And last, the particular subject on the economics of the alternatives should be examined.

The financing of the new facilities is discussed only in general terms in the OAT report. Yet it is stated on page 171 "that the cost of design and construction does not appear to present a serious obstacle to the development of new facilities because of the many ways alternative waste management facilities can be financed." The mere existence of financing options does not demonstrate that the program is viable, particularly given the uncertainties of the above-listed elements. It's just not sound enough in an engineering package and the kind of quantification and qualification has not been done to say that a financing is available for this type of technology at this time.

In summary, the information presented also fails to establish that the alternative technologies are feasible, affordable, and safe when related to California hazardous waste streams. Regulatory action resulting in the expenditure of millions of dollars by industry and government must be founded on the basis of a viable program.

CHAIRWOMAN TANNER: Thank you very much. Michael Meredith, who is representing the Chemical Industry Councils,

will be our next witness. We have a large number of witnesses but it's because all of you people requested that you be allowed to appear as witnesses, so bear with us.

MR. MICHAEL MEREDITH: I'll try to be brief.

CHAIRWOMAN TANNER: Would you identify yourself, please.

MR. MEREDITH: Good afternoon, Madame Chairperson. My name is Michael Meredith. My colleague, Clark Boli, and I represent the Meredith/Boli & Associates, known as MB&A, located in Beverly Hills, California. Each of us has worked for 10 years in environmental science and our work has included siting studies, technical evaluations, feasibility studies, environmental assessments, and regulatory analyses.

In particular, we have been involved very actively in the technical and regulatory issues surrounding hazardous waste management through our work in California during the past few years. Our firm was contracted by the Chemical Manufacturers Association in Washington, D.C. to perform a brief review of the several recent documents that are the subject of today's hearing. I suspect that ours is the lengthy consultant report to which Pete Weiner referred to earlier. The results of our independent third-party critique are presented in MB&A's review document dated 15th of January, 1982, which you have received.

CHAIRWOMAN TANNER: Does the Office of Appropriate Technology have copies of this?

MR. MEREDITH: I understand they do.

CHAIRWOMAN TANNER: Good. Because I would think that is very important to them.

MR. STODDARD: We got that from your staff a few days ago.

CHAIRWOMAN TANNER: O.k.

MR. MEREDITH: We did not distribute the report.

CHAIRWOMAN TANNER: Fine.

MR. MEREDITH: In view of our familiarity with the issues at hand, and our recent work for CMA, we have been requested by the Chemical Industry Council to present our work to your committee today. It may be helpful for you to scan the table of contents as we provide this brief summary; I emphasize brief. Also, we encourage you and your staff to read the document in its entirety at some later date to gain a more complete appreciation of the background information used to support observations.

First, I will discuss MB&A's major findings from review of the September 1981 report by the Governor's Office of Appropriate Technology and our evaluation of related documents available at the time of our work. Then Clark will present a summary of recommendations that have resulted from our evaluations.

Before we begin, however, I wish to stress that the findings and professional opinions offered in this testimony, as well as in the 15 January document before you, are strictly our independent perceptions. We do not represent CMA, CIC, or any group as agents for policy statements.

The September 1981 document now commonly known as the OAT report is a responsible first step towards the goal of providing an adequate information base upon which to develop a new comprehensive program to successfully manage California's waste, especially those termed by OAT as "high-priority." The OAT report presents a large body of data and reviews a number of important issues through compilation of a formidable list of references. However, it is only a first step of many that must be taken before a solid foundation of relevant information is constructed. Upon review of OAT's report, several indications of the preliminary nature of the document were apparent. Our major observations concerning the OAT report have been presented in MB&A's 15 January review.

The OAT report states up front that land disposal of certain hazardous wastes is inappropriate. However, several statements including mention of an independent study by SCS Engineers of Long Beach are made apparently to convince the reader that secure Class I land disposal facilities, as well as other conventional techniques such as deep well injection and land farming, are unsafe, at least for a particular waste.

ASSEMBLYMAN ELDER: Pardon me. What was the name of the firm? SCS?

MR. MEREDITH: SCS Engineers in Long Beach.

ASSEMBLYMAN ELDER: Does the acronym stand for anything? Do you think it's Stern and Conrad or something.

MR. STODDARD: There's not a representative of

their firm here. I don't see any.

MR. MEREDITH: They're known by that, and I think we've lost... Anyway, conventional techniques such as deep-well injection and land farming are unsafe for certain wastes. We do not feel that the OAT report provides data sufficient to conclude that carefully designed, permitted and operated land disposal facilities are categorically unsafe even for the most toxic chemical species. For example, the extent to which the various risks enumerated in Chapter 3 of the OAT report are incurred, each are a function of the effectiveness and rigor with which the siting and permitting process is carried out. My colleague will return to this question a little later. It is inappropriate for the derivations of component waste streams, which were performed by OAT based on the UC Davis Study, to be considered anything more than first order approximations. We do not believe that these estimates of off-site hazardous waste quantities, which were extrapolated from only two months of data that were a little more than one and a half years old, constitute a sufficient characterization for an entirely new program to manage California's hazardous waste. Furthermore, as clearly noted by OAT, this evaluation did not include consideration of the 74 percent or greater component of California's total hazardous waste stream, namely, on-site waste. Until on-site wastes are evaluated, no responsible program can be completed that reflects the logistics, technical environmental concerns, and the drastically different economics of on-site waste

management. Substantial additional development work is necessary to establish the availability and environmental and health consequences of deployment of many of the environmental and health consequences of deployment of many of the alternative technologies discussed in the OAT report, especially those slated for immediate use. No attempt is made in the OAT report to quantify the total volume of residuals or concentrates generated from the use of the recommended alternatives to land disposal. Clearly, at least for several years, some of these must eventually reside in a still hazardous form in some type of land disposal facility.

At least one conservative approach to hazardous waste management retrievable storage is omitted from OAT's recommendation. Derivations of the estimate and economic conclusions in the OAT cost analysis are not presented in sufficient detail for the reader to draw the same or any other specific conclusions. Also, a realistic assessment of economic effects on the State's economy, notably, jobs and product prices, is not provided. Moreover, the combination of the poorly defined status of the new program, the gross uncertainties associated with characterization of waste volumes, and the general lack of data, a portion of which can come only from experience, leads us to conclude that quantitative assessment of economics is premature. Regardless, the differential economic effects upon large versus small generators -- the impacts of new fees, the effects on growth

and a host of potential economic consequences, must be evaluated when data can be generated. At this point, a few short comments regarding the subsequent implementation of OAT's recommendations are appropriate.

Executive Order B-8881 appears very premature pending availability of alternatives to manage "high-priority" wastes. The new scheme, as described in the 1981-82 Implementation Program, does not follow a number of the recommendations in the OAT report. The new framework is contingent on the passage of several pieces of legislation that are pending in the Assembly and Senate. We do not mean to even imply that this is inappropriate, but this unresolved status does point to the premature nature of activities that are contingent upon not yet approved statutes. Substantial costs, project delays, and potential environmental risks will accrue to industrial and government waste generators, as well as the public, if the present highly fragmented, largely discretionary approach to the regulation of waste management is continued. Now Clark will provide a few additional comments.

CHAIRWOMAN TANNER: Thank you very much.

MR. CLARK BOLI: I thought I was going to be the first person to be able to say good evening to you, but I didn't quite make that.

CHAIRWOMAN TANNER: Could you identify yourself for the record.

MR. BOLI: My name is Clark Boli. I'm a principal

with the Firm of Meredith/Boli & Associates.

CHAIRWOMAN TANNER: Thank you.

MR. BOLI: Based on our limited analyses of the OAT report and the related documents that were available to us during December of 1981, MB&A has developed five major recommendations for consideration by your committee. All of them in our opinion are prerequisite to the development of a comprehensive program to manage California's hazardous wastes. They are: (1) initiate a coordinated program of California research to answer many of the outstanding questions that correctly were identified in the OAT report. There are numerous examples of needed research and I don't want to imply in any way that we want to study the problem to death. However, it is noted in the OAT report but is apparently ignored in subsequent policy statements, such as the 1981-82 Implementation Program and Executive Order B-8881, substantial amounts of data are required before a workable waste management program can be launched. Some of these data and analyses include: generator specific volume reduction analyses and waste stream characterization studies, research on primary health effects associated with "high-priority" wastes, a rigorous analysis of off-site and on-site waste disposal practices, especially current data on waste volumes, generation patterns, and economical service regions for alternative technologies. An evaluation of the environmental effects and risks, including the oftentimes missed secondary effects associated with alternative technologies and treatment

complexes. An estimation of the volume of residuals from alternative technologies that still will require sequestering in a secure landfill. Comprehensive analyses of some land disposal techniques still are required. Such techniques include landfarming, deep-well injection, evaporation ponds, and landfills for the ultimate residual disposal. These types of facilities have a place in a comprehensive waste management program, if properly sited, operated, and closed. Also required are engineering and feasibility assessments which are matched to generators specific and/or regions specific waste streams.

The need for pre-treatment, especially the separation of complex waste streams, is only cursorily addressed in the OAT report. Such pre-treatment could substantially increase the alternative treatment cost reported by OAT. Finally, other economic effects of the new program must be addressed at a greater level of detail. Economic impacts from the premature use of an advancing technology, effects from small generators, and differential impacts on on-site disposal operations are noticeably missing from OAT's analysis. Further, the OAT economic analysis only addresses the incremental increase in waste treatment cost to generators from the alternative treatment of high priority waste currently disposed of at off-site facilities. As such, it grossly underestimates the cost to the regulated community and ignores effects on jobs and product prices. On-site wastes, which are based on new information presented here today by

Mr. Stoddard, comprised 92 percent or more of the hazardous waste generated in the state on a yearly basis. That's up an incredible amount from the previous OAT report and the 1981-82 implementation program report.

CHAIRWOMAN TANNER: Those figures don't seem to be the same as...

MR. STODDARD: Well, I'm not sure about his numbers, but it sounds in the ballpark. We talked about initially five million tons of hazardous waste which we felt were generated both off-site and on-site. Today we introduced some new numbers. Instead, it looks like that's closer to about 16 million, although we did point out that there were very few high priority wastes and those additional on-site materials, so I think there's a slight misrepresentation of what the impact of those numbers really are.

MR. BOLI: I think, Madam Chairperson, that we don't know the exact quantities and the subject is changing so quickly we finally came out with some good data on what volumes of waste are generated in the State of California, and only three and a half months after those data were presented, now we're up from five million tons of total hazardous waste in the state to 18 million tons. The increment of 13 million tons we have to assume, all right, is from on-site facilities. Therefore, you know, what happened? I mean it's very hard for industry or we as consultants to assess the actual effects of any program unless we have good data up front which is a point which I would like to close

with, really. I think another point here is that although the cost of alternative technology treatment facilities may be comparable with off-site facilities some day, on-site disposal costs right now are significantly lower than those charged by off-site facilities that must make a profit and are subject to changes in the market. That was all our first recommendation. Our second recommendation is that...

CHAIRWOMAN TANNER: I thought that was a number of recommendations.

MR. BOLI: Just to summarize, the point is that there are substantial amounts of additional research and hard data needed before we can launch out on a comprehensive program for hazardous waste management in California. That was the first point. All those were sub-points listing the types of information that are needed to make rational decisions.

CHAIRWOMAN TANNER: As far as the volume is concerned, it's important that we know how much is being generated, but the safety of the public is you know whether it's a small amount or a large amount. The safety of the public is paramount.

MR. BOLI: Our role is certainly not to question public safety issues. In fact, we share the concerns that there are certain practices, many of them probably actually occurring on on-site situations. But they need to be addressed in a comprehensive and logical sequential manner rather than just going out fighting windmills.

Our second recommendation is that a cooperative

approach to the development of regulations for the management of hazardous waste should be established. The current approach appears to be one of reactive planning; that is, proclaim a regulatory goal and then expect the regulated community and public to develop the necessary interstructure to implement it. Such an approach is counterproductive to solving California's hazardous waste management problems.

Our third recommendation is that programs such as the California Waste Exchange should be required to operate at a level of technical and managerial sophistication, equal or superior to the alternative technologies for waste management that are being proposed. It was stated earlier today, that last year the California Waste Exchange processed 17,500 tons of waste and, by processed, I mean they assisted in the disposition of those wastes, and that was with the staff of 1.5 persons. It was further stated that the staff would be expanded to five persons within the next year or so. If we assume the same rate of efficiency, 1.5 persons per 17,500 tons, at the end of the year, at least theoretically, they'd be able to process 58,000 tons of hazardous waste which, if the sum total of 18 millions tons is involved, we're only...

CHAIRWOMAN TANNER: I don't think we can assume that.

MR. BOLI: We can't assume that but still we're only going to be...

CHAIRWOMAN TANNER: We have to hope that industry is cooperative.

MR. BOLI: Right, but the point is that still even with that level of commitment of staff, only a small percentage of the waste generated in the State of California is going to be able to pass through the California Waste Exchange, or they're going to be able to really pay a lot of attention to it. That's the point. The point is not to nitpik over whether 17,500 or two million tons, but very much so in favor of it and I think it needs to be expanded and given the level of technology and sophistication that they need.

CHAIRWOMAN TANNER: That's what the department is planning on doing.

MR. BOLI: My question then is, are five people enough to do such a big job, especially when so much groundwork has to be laid to do it?

Our fourth recommendation is that other readily realizable programs such as volume reduction, recycling, and retreatable storage, should be investigated. This point highlights the need for a comprehensive approach to waste management that maximizes the use of potential resources and permits the evolution of a workable program that is cost effective. A rigid ban on the land disposal of certain waste without adequate advance planning may be too absolute for real world implementation.

My fifth and final point is that a legislative solution to the untenable hazardous waste facility siting and permitting issues may preclude their establishment in the

marketplace. Storage facility, transfer stations, and residual disposal sites are needed to make any new waste management scheme work including a ban on the land disposal of certain hazardous waste. Solve the siting problem and it may be possible to eliminate reactive planning.

CHAIRWOMAN TANNER: We have taken legislative action along those lines.

MR. BOLI: And the final point here being that it will be possible to eliminate such reactive planning, because many of the technical, scientific, economic, and public health questions appropriately can be assessed during the permitting process.

In conclusion, the purpose of MB&A's critique was not to discredit OAT, its consultants, or any other involved California authorities. To the contrary, we recognize the difficulty faced by the regulators when trying to develop a regulatory administrative and technical solution to this complex problem. We trust that these few observations will provide a small constructive step toward the essential goal of safe and effective management of California's waste, especially those termed high priority by OAT. Through review of California's new program as presently described in a document to which MB&A was privy, we've found that a good start has been made, but only a start in collecting the necessary information. The scientific and technical principals, as well as the societal mandate for prior public scrutiny, call for a more deliberate and intense pursuit of a new

approach. At present, we believe that the cart has been put before the horse. If I had to pick just one conclusion to make as a result of our review, I would have to say that a siting and permitting process must be developed, not just streamlined. This will bring about the siting of any alternative or conventional type of priority waste management facility. Thank you.

CHAIRWOMAN TANNER: Thank you very much. I think the state is addressing that problem of siting and it certainly would go hand in hand with the OAT report because we have a council that will develop criteria for siting for waste management. Many of those things that you talked about in your recommendations, I think you offered some interesting and very constructive recommendations.

MR. BOLI: We hope that you'll read the report that was put together and we're available to discuss anything in there with you at anytime.

CHAIRWOMAN TANNER: Thank you very much.

MR. BOLI: Thank you.

CHAIRWOMAN TANNER: Next we will have Hugh Kaufman, who is Senior Adviser on Hazardous Waste and Assistant to the Director of Hazardous Site Control Division of the Environmental Protection Agency. That's quite a title.

HUGH KAUFMAN: Thank you very much.

ASSEMBLYWOMAN WRIGHT: Can you just be called an S.A.?

MR. KAUFMAN: Excuse me?

ASSEMBLYWOMAN WRIGHT: Can you just be called an S.A.?

MR. KAUFMAN: Well, that's the politest thing people have called me. First of all, let me start by saying I am from Washington and I'm here to help you.

(Laughter)

ASSEMBLYWOMAN WRIGHT. Is the check in the mail?

MR. KAUFMAN: In any event, it's kind of light from my point of view. I came in last night and it's after nine my time. Usually I've had a martini or two, which means I've got hazardous waste usually flowing in my veins at this time, but not now.

(Several voices and laughter)

MR. KAUFMAN: In any event, let me tell you a little bit about myself and why I came here to see if I can help you. Back about 12 years ago, I was an engineer and I just came out of the Air Force as a Captain during the Vietnam War, and started the Environmental Protection Agency with another bunch of younger people at the time. I was young then also. One of the issues that we saw a crying need for was toxic waste control. At the time, when we had a meeting to discuss what we were going to do about the country's toxic waste problem, we could barely get three people into a room. Now I haven't seen this many people talking about toxic waste in the early 70's. But now it's become a glamour issue.

I started the program to investigate toxic waste

dumps in the mid-70's. For five years, I was the federal government's chief investigator. The cases that you've read about in the newspapers or hear about, from Love Canal to Seymour, Indiana, were investigated either by myself, personally, or by my staff. I learned many lessons. I've heard a lot of statements today. To be honest with you, I want to be perfectly blunt. I am not representing the Carter administration's positions. I mean, excuse me, Reagan administration, I lose track. I'm not representing their positions on the issue. I'm just giving you the benefit of my 12 years' experience in the field with the federal government.

The industry positions that you've heard today are the same litany of words that we heard when I was testifying before the United States Senate and the United States House of Representatives back in the 70's. There are no new arguments here. In fact, some of the arguments I've heard, and I don't mean to be disrespectful, have been rejected by the Congress for over four or five years. I would like to describe to you the real issues that you'll have to grapple with in determining whether you want to ban landfills or not.

The issue was stated very clearly in this report by Joe Mayhew, the gentleman who was here before in his report. On page 47 they stated basically that the OAT people were trying to shift the liability on the shoulders of the waste generating industries. That's the issue. In reality, and

I'm not an attorney but those of you who are can confirm that the common law, not OAT, puts the liabilities on the generators. Some of the laws and regulations that have been promulgated all over this country have tried to shift that burden to the taxpayer against the common law.

Back in the middle 70's, as a result of these actions, I initiated a study with the staff to investigate 50 randomly selected landfills throughout the United States, clay lined landfills, old ponds. Virtually every landfill leaked. Recently, the government of England did a similar study. It takes about four years before our studies get over there. They just completed a similar study of 40 randomly selected landfills, and all of those leaked. You heard about the Princeton study. Four of the most "secure landfills" all leak. I think we've proven in the federal government in the United States, and in federal governments in other countries, that the burden of proof is on the landfills to prove that they don't leak. I have not yet seen a study, including this one, that proves that landfills are safe. We heard a lot of talk, but nobody has proven them to be safe. Quite the contrary.

CHAIRWOMAN TANNER: Question from Mrs. Wright.

ASSEMBLYWOMAN WRIGHT: I'm not going to disagree with you because I don't think a landfill is safe, but I'm going to ask you this question. Do you really sincerely believe that you can just eliminate landfills? There has to be a certain percentage in the overall package that will

be landfills.

MR. KAUFMAN: Well, I'd rather, you know you've shifted the discussion now to your issue. Yes, there is need for some residuals that are either detoxified, chemically fixed, or stabilized to go to landfill. Dow Chemical Company came to our offices last week and said that they are implementing a program companywide that's far ahead of California's program. They told us that 99 percent of their wastes are being destroyed or recycled with only one percent left which is being detoxified, stabilized, or in other manners rendered harmless. So Dow has briefed us in Washington that they're ahead of you in California, which is why I don't understand the Dow man coming up here and making light of this. Now, either Dow was lying to us in Washington, or Dow is lying to you in California, which brings me to another point. Congress of the United States...

CHAIRWOMAN TANNER: Question.

MR. KAUFMAN: Yes, sir.

ASSEMBLYMAN KONNYU: You know in looking at this whole issue, the question is not so much about landfill this and landfill that, but rather the issue is the fear of the manufacturers as to how their regulators are going to act, and in order to assure that their regulations are wrong, the manufacturers simply want to come out and state their point of view so that when the OAT folks put their act together from that, it's going to be right, so that's what we're going to...

MR. KAUFMAN: I agree with you and I think the best way to do that, if I may make a recommendation, is to take the materials that Dow provided us in Washington and codify them in your laws.

CHAIRWOMAN TANNER: Is Dow's testimony to you...

MR. KAUFMAN: This was in briefings. I will get you the Dow material, and I would strongly recommend that perhaps we should just codify that not only in this state but nationally.

ASSEMBLYWOMAN WRIGHT: Could I...

CHAIRWOMAN TANNER: Question.

ASSEMBLYWOMAN WRIGHT: I guess maybe I read it wrong, because you're talking about the gentleman that was concerned that he was included on...

MR. KAUFMAN: Yes, but in answer to one of your questions, the gentleman stated that he did not concur with the direction of banning landfills. I remember that statement.

ASSEMBLYWOMAN WRIGHT: Yeah, but you're talking about -- is this report now you're saying that they gave to you in Washington, one percent they still said was going to landfills?

MR. KAUFMAN: Only after it's been detoxified, stabilized, or treated, which is fine. I think that's very important. I concur with that policy.

ASSEMBLYWOMAN WRIGHT: What my concern right now is the fact that I either heard him wrong or you didn't hear what he said, but I thought his inference in regard to this

report was the fact that he was concerned that his particular industry was going to be mandated to take some sort of alternative technology which was, in fact, opposite to the technology maybe they're into right now, and so that maybe they shouldn't be directing themselves in the area they want.

MR. KAUFMAN: He may have made that statement also, but he also made the statement that he does not concur in the direction of banning the landfills by way OAT is going. Now I may have misheard him. The point is whether we're talking about two different things.

ASSEMBLYWOMAN WRIGHT: But my concern is it very well may be the report you're talking about that was given to you in Washington. Maybe the fact that they're into an alternative technology other than...

MR. KAUFMAN: No, no, no. That technology concurs with the OAT report.

ASSEMBLYWOMAN WRIGHT: It does?

MR. KAUFMAN: Yes, absolutely. No question about that. The OAT report is very general in its writing. To be honest with you, from a technical point of view, in talking to chemical engineers, and I interact with them all the time, who worked at Dupont, Dow, Monsanto, they don't understand what the fury is and what all the hubbub is all about because they know how to handle their waste. They know the waste better than government does. They can handle it on their own property. They want to get it off their property. No question about it, and let me tell you. Let me read to you

from the industrial journals reporting on industry's position.

These are reports of hearings in the Congress of the United States from Waste Age, June 1982. The insurance industry testified that it would be impossible for them to price premiums and guarantee coverage for such facilities. So the insurance industry is saying, we're not going to cover you. We can't do it. Now that means the taxpayers have to cover these facilities. Now let's take a look at what the State of California can do to protect their taxpayers, and the reason I raised this issue is Mr. Elder said we're in a budget crunch. Mr. Elder, you don't know how much budget crunch you're in because the superfund, the federal superfund had some interesting things thrown into it at the 25th hour by lobbyists for the chemical industries, the Chemical Manufacturers Association. What it says is when that fund reaches $900 million in a year and a half, it can no longer collect taxes for that fund. Presently, at the rate EPA is spending superfund money, we will meet that $900 million available to clean the toxic waste dumps. EPA feels there are tens of thousands of toxic waste dumps in the United States requiring clean up, and we've only had money to clean up at most a hundred. O.k., and you are pre-empted by the language from taxing anybody, hasn't been tested in your courts yet, on taxing anybody to use your powers to clean up dumps by taxing anybody except your general taxpayer.

ASSEMBLYMAN ELDER. Well, I might direct to you...

CHAIRWOMAN TANNER: Go ahead.

ASSEMBLYMAN ELDER: Well, I had an alternative proposal which was used in tax increment financing. You might look at it and it may come back into some vogue, if you are correct. It didn't get a lot of support from the committee.

MR. KAUFMAN: Love Canal, if those wastes were disposed of properly through high temperature incineration, etc., would have caused at most a million dollars. The taxpayers of the United States have already spent almost a hundred million dollars. We still haven't cleaned it up yet.

ASSEMBLYWOMAN WRIGHT: Excuse me. Was that technology available at the time of Love Canal?

MR. KAUFMAN: Well.

ASSEMBLYWOMAN WRIGHT: At the time it was being filled up or whatever?

MR. KAUFMAN: Yes.

ASSEMBLYWOMAN WRIGHT: The technology was available at that time.

MR. KAUFMAN: Yes, it was. Whether they could reach a 99.999 percent destruction rate, or 99.9 is in question, but certainly over 99 percent of those wastes could have been destroyed then. It's just more expensive on initial cost. Those were all organics, mostly c56.

ASSEMBLYMAN ELDER: Mr. Kaufman, if I may add a little clarification here, I think that the people, many who are in this room, have an interest in perpetuating the

confusion. I mean, let's be honest about it. The first law of a bureaucrat is self preservation. He needs to solve his problem, you know then we're not getting any.. you've got a contract. Some of the people in the area of vested interest in the marginal basis of how things are done now, and frankly any change at all messes up their little program, so by everybody raising their hands and walking around in giant circles, we perpetuate this thing. Now I don't think it's that complicated and it's refreshing to hear you say that it isn't. I think we need some sites and I would ask you, really the question that comes to my mind is that in your 50 dumps that you looked at, were any of them in California, and I'm sure they were and, if that's true, did you happen to look at Kettleman Hills where all this stuff is going because that would be a really important question in all and, if it is leaking, the Water Resources Control Board has got some tall explaining to do, as well as our Department of Health Services.

MR. KAUFMAN: Well, as a government official in Washington, who has had the most experience in investigating toxic waste dumps, I would gladly recommend and be happy to have you invite Ann Gorsuch, our administrator, to have me come out and investigate and do a full field assessment of that site, and I'd be happy to do it and I'd be here one day after she said yes, and I'll give you an answer three weeks later.

ASSEMBLYWOMAN WRIGHT: Excuse me, those dumps that

you did examine, how many were called legal sites and not illegal?

MR. KAUFMAN: They're all legal.

ASSEMBLYWOMAN WRIGHT: They're all legal sites?

MR. KAUFMAN: Sure, all legal. Remember now that we set the federal level and in 99 percent of the states. Love Canal is legal.

CHAIRWOMAN TANNER: Mr. Kaufman, we have to move along because we have a large number of witnesses today.

MR. KAUFMAN: O.k., I'd like to conclude. I've got a lot of stuff and I'd love to debate the chemical company people or the big waste disposers, unfortunately.

CHAIRWOMAN TANNER: You can leave that at their workshop or...

MR. KAUFMAN: Oh, no, no. no. They have refused to debate me all over the country including IT. IT was offered an opportunity to debate me. They've wanted to put a landfill in a wetlands in Western Massachusetts and they refuse to debate me. Perhaps they'll debate me in California, though I doubt it.

CHAIRWOMAN TANNER: Not here.

MR. KAUFMAN: Now let me conclude. California's approach is in the right direction. We must set a goal for industry. Government should not tell industry the nitty gritty technical details of how to do their job. Denmark has set goals. Dow has come to Washington and given us recommended goals that they have for their company. I think

until we codify those goals have strong enforcement to insure that everyone is playing by the same rules nationally. We will continue to have chaos and I do not understand why the industrial leaders of this country continue to promote this chaso, because they got to be losing money with this chaos. We do not have national standards for toxic waste dumps that make sense. As things are going now, we won't for four more years. And industry more than anybody should force these goals and enforcement. Thank you very much.

CHAIRWOMAN TANNER: Thank you very much. Question here.

ASSEMBLYMAN KATZ: The code questions first. I think you may have said it more subtlety than I'm going to say it. You don't expect us to make much national progress in the next four years in terms of what unification system or broad national goals in this area?

MR. KAUFMAN: This administration in Washington has already stated that they're not going to. They, for example, threw away any proposal for financial responsibility for landfill operators. So landfill operators in the United States do not have to have financial responsibility and can be allowed to operate legally. And, by the way, if you have stronger standards than our standards, your standards may be knocked down in court because you have to be equivalent...

ASSEMBLYMAN KATZ: The other part of my question, one which is very simple, it would be very helpful to us if

we can get copies of what Dow forwarded to you.

MR. KAUFMAN: I will send you copies of what Dow forwarded to us.

ASSEMBLYMAN KATZ: Second point is, going back to something that we talked about a little bit earlier. Obviously, making some of this as economically feasible as possible is the key. Particularly, where small producers are concerned. How do you take into account that what may be economically feasible for Dow may not be and probably isn't for the electroplating company that works, you know, in an industrial area?

MR. KAUFMAN: It's very easy to do. In an industrial area where you have small companies, what you can do is set up a facility where the waste is, in the community where the jobs are, and where the waste is, handling just that amount of waste the company may be a group of the smaller companies that are together. In other words, you'll have to break off analysis, for example, on a particular industry like electroplating, which is small. O.k., you have your analysis, you said o.k. you get tax credits or whatever to help finance that facility. There are special industries like that that need that kind of help, but I'm talking about the greater volumes of waste for strong national standards without those tax credits. Now Denmark's approach would be appropriate for your electroplating waste.

ASSEMBLYMAN KATZ: They do recognize the difference.

MR. KAUFMAN: Because the county where they are runs a site, and the federal government monitors to make sure that it's complying and it's handled at that local level where the industry is and where the jobs are.

ASSEMBLYMAN KATZ: Thank you.

CHAIRWOMAN TANNER: You have a question?

ASSEMBLYWOMAN WRIGHT: No, I think it was answered. As I was saying, you know it's fine to have the program and the goals of Dow, but Richard picked up on it. The fact that it's the small fellow and moreso you know you talk about them being industrial sites, there's a lot of those little print shops that are not. They're on main streets.

MR. KAUFMAN: Well, but I think the point is, you'll need regional facilities near where the plants are and where the people who have their jobs tied to where the plants are. In other words, you shouldn't take the waste that disbenefits that industry and put it somewhere else where the people who don't have the benefits. In other words, if you want the benefits, you have to take some of the disbenefits at the local level. It's as simple as that.

ASSEMBLYWOMAN WRIGHT: Well, tell the local people that.

MR. KAUFMAN: Well, but then you know that's their option. If they don't want the jobs, they have the option not to accept the liabilities. By the way, I want to end this by saying, I go around the country, am called in from

Connecticut to Ohio. The issue has no political line. In Connecticut, the Democrats are the bad guys, the Republicans are the good guys. In Ohio, it's vice versa.

CHAIRWOMAN TANNER: In California, everybody is a good guy.

MR. KAUFMAN: Everybody's a good guy in California, but one thing I've noticed around the country is that the large chemical companies and the waste disposers are lobbying fiercely and afraid of what California is doing because you're setting the pace. And, if you're successful in starting policy direction in movement towards banning unnecessary landfills, then the whole country will ultimately follow and they don't want that, so you're going to be lobbied. You're going to get things funded by CMA in Washington. You're going to, as time goes on, you're going to have all the big boys coming in, so be prepared for that. Thank you very much.

CHAIRWOMAN TANNER: Thank you very much.

ASSEMBLYWOMAN WRIGHT: Don't you feel there's a compromise?

MR. KAUFMAN: Excuse me?

ASSEMBLYWOMAN WRIGHT: Don't you feel there's a compromise that can be reached?

MR. KAUFMAN: The only compromise between the big companies and the people?

ASSEMBLYWOMAN WRIGHT: Well, I'm talking about a compromise as far as this whole state is concerned. I mean I don't think you -- you've got to see that your time

schedule...

MR. KAUFMAN: Well, the theory that we've used and this is the theory that I concurred with that was used in the Nixon and Ford administrations which is you set the goals based on public health protection and you set the implementation based on economics.

ASSEMBLYWOMAN WRIGHT: Very good.

MR. KAUFMAN: And that's the goals we used. I won't speak about the Carter administration because everyone knows how bad I feel about that administration.

CHAIRWOMAN TANNER: Thank you very much.

MR. KAUFMAN: Thank you very much.

CHAIRWOMAN TANNER: I wonder if anyone from Dupont or Dow would like to respond to that?

JACK JONES: I'm from Dow, and I did not hear his remarks.

CHAIRWOMAN TANNER: Couldn't very well respond then, could you?

MR. JONES: No, but I'm told that he called Dow a liar. (Inaudible)

CHAIRWOMAN TANNER: Oh well, we're not going to have a debate here. If you hadn't...

(Various inaudible voices)

CHAIRWOMAN TANNER: Come on up and identify yourself, Jack.

JACK JONES: My name is Jack Jones with Dow Chemical Company. I didn't hear the gentleman's remarks.

CHAIRWOMAN TANNER: He said that Dow said that they were going to either detoxify or reduce or do all of their finding alternative methods for more than 99 percent of their wastes.

MR. JONES: Well, that's certainly our goal. The National Environmental Manager was a witness in the audience and left just as this fellow began to talk, and he was not able to be here but he knows that no proposal has been made recently such as indicated, but certainly it is our goal. Here in the West, we incinerate and destroy 72 percent of our waste in our California plants and we take care of all but four percent of the rest on our own side. And I hope that Bryant Fischback's statement here emphasized that we support getting off of landfills and we want to encourage a reduction in use of those, but it has to be done in an orderly way, in a way that makes some sense, and I think that was what he was encouraging in his whole statement.

CHAIRWOMAN TANNER: I think the committee understood that.

ASSEMBLYWOMAN WRIGHT: Just for the record, you're saying basically that Dow is eliminating about 96 percent of their wastes?

MR. JONES: That is our goal. We have not eliminated 99 percent of our waste.

ASSEMBLYWOMAN WRIGHT: You're saying 70. What did you say? 72, is it 72 or 75 percent?

MR. JONES: 72 percent of our waste that we

generate in our plants in California we destroy...

ASSEMBLYWOMAN WRIGHT: And then the 24 percent on-site.

MR. JONES: Is taken care of on-site.

ASSEMBLYWOMAN WRIGHT: So roughly about 96 percent is what you're destroying right now?

MR. JONES. Yes. Yes.

ASSEMBLYWOMAN WRIGHT: You only have five percent to go.

ASSEMBLYMAN KATZ: The 24 percent off-site is not necessarily destroyed. It's landfilled. It's not destroyed.

ASSEMBLYWOMAN WRIGHT: Oh, you're not eliminating. That's the story...

MR. JONES: No, we put those in solo evaporation ponds. The water is evaporated off and because we have such good sunlight out here, we can evaporate about 46 inches a year, and those ponds will last 10 years and then we go in, take out the solids and recover chemical values from that. At least that's our plan...

(inaudible)

MR. JONES: Wait a minute now, this guy is ridiculous -- but that's (clapping)

CHAIRWOMAN TANNER: Just a minute, please let's not make a circus of this and please don't speak from the audience. Thank you, thank you. I think we're getting tired. David Bauer from IT Corporation will be our next witness. I think your name was mentioned earlier, or your

corporation.

DAVID BAUER: I think I'm the reluctant debator. Whatever. I wish this stuff was easy as it sounded all day. For the record, I'm David Bauer. I'm here representing the California Chemical Waste Processors Association. I was also a technical advisory committee member on the OAT report and I suspect that viewpoint will slip in with some of my comments and, of course, I'm an employee of the IT Corporation and IT's name has been used a lot today so, if you have questions on specifics, go into that. I have given the sergeant a letter. I have no intention of reading it.

CHAIRWOMAN TANNER: These will be available to all.

MR. BAUER: I would like to make a few comments. After listening to Bryant Fischback's testimony today, and then the testimony of Mike Belliveau, I think my own thoughts come more into focus. It seems that Selina Bendix and Mike Belliveau's points of view were adopted by the committee, at least they felt they were and we were very satisfied. Bryant and myself were somewhat less satisfied and perhaps felt we were a little misled or whatever.

In summary, the old report I felt was a handbook as Bryant did. I very much support his remarks. OAT has done a lot of things like that. I think Bryant and myself, certainly myself, felt that the handbook similar to others that they put out was the goal. I don't think we can blame OAT or credit OAT for the Governor's Executive Order, if you may, but I think that's really what we're arguing with.

The Chemical Waste Processors' Association really has no directional argument with the report. We have arguments with some of the specifics, in fact, a lot of specifics, but I don't think they were very important. We support the concept of destructive technologies for state-of-the-art stuff or whatever you want to call it, in going that direction and we said so then, and we'll say so now. I just wish it was as easy as saying go get it done. It doesn't work quite like that. I don't think a lot of the innuendos that are happening now are really helpful to us who are the off-site disposers, if you may. The people that are really charged with the solution, whatever gets mandated, whatever is going to get done off-site, we have to do. I've heard terms used today almost interchangeably like, "high priority," "extremely hazardous," and "hazardous" in the same sentence. "Toxic," "persistent," mutagenic," "carcinogenic," all those terms just bandied back and forth. In fact, one of the first speakers today started out saying, "Were only dealing with the toxic wastes, the mutagenics, the carcinogenic things, and then immediately went into 500 thousand tons a year and I got the innuendo that that was all mutagenic and carcinogenic, and I think we all know better than that. Certainly there are some problems. I don't think anybody is going to say there aren't, but they're some other real realities today, despite what's been said.

I am a chemist. I worked in this field as long as I can remember, I think about 20 years. I worked specifically

with permitting process for about 14 years and it's not simple. I wish that I was as optimistic as to believe that you could achieve a permit even through the state agencies in this state in one year today.

The realities of the situation are that you have to work for the local community and you have to work with the federal government. They both work their own way at their own time frame on and off. I think Assemblyman Elder's comment this morning on proposing something in Long Beach is typical of what the local response is. Do it someplace else and I'll be damned if you're going to do it in my community. I'll hold you up on the state-of-the-art process or whatever. That's kind of the uniform response. I believe thoroughly that on 24 hours' notice with the proposal for a technical hazardous waste management facility any place in the United States, you can draw a crowd of at least 2,000 angry people.

ASSEMBLYMAN ELDER: Well.

MR. BAUER: I think that's real.

ASSEMBLYMAN ELDER: Mrs. Tanner. A specific fact in the case of Long Beach is rather unique...

MR. BAUER: I understand.

ASSEMBLYMAN ELDER: I think they did generate a high level of concern. If there had been an industrial area, if there hadn't been houses within 50 feet of the property line. That really wasn't what... I was speaking to your response on the incineration ship wharf or something like

that. Your response to that was immediate and that's the kind of response that we're usually getting. The reality situation is, and I've got two cases that I'll give you. One is Sand Canyon, which was a technical solution with land-filling or whatever you want to call it, of residues but, basically, technical and the whole bit, it got into emotional embroilment, if you may. We spent a million and a half dollars over a period of three years and failed to get a hearing, and that's the facts of life. Let me give you a success story.

In the State of Louisiana with a technical facility that the state wants very badly we started our technical design in late '78. We completed the state permitting process in late 1980, and with some luck we'll get through the federal permitting process this year. But, of course, we're still in court. That's the permitting aspects of it. We were optimistic, too. We started ordering gear when we got into the state permitting process. We now have gearings and borings and kilns and so forth stacking up in our yard in Louisiana, all costing a whole heck of a lot of money, but we don't have any place to put it because we haven't completed the entire permitting phase. Regardless of when we finish that phase, when we feel comfortable about going into a hundred million dollars of construction, it's going to take us three years to build the facility to get the first unit on line. So, if you want to go back and say o.k., a good situation, a success story starting in '78 at seven years, and that's how

long it took. That's real.

CHAIRWOMAN TANNER: I'm interested, do -- are you people going to address that in workshop, work together with the people who are in disposal, disposing of the...

MR. STODDARD: Madam Chairman, we have worked so hard with the disposal industry. We have been in almost constant...

CHAIRWOMAN TANNER: I mean, as far as your program and the process of permitting.

MR. BAUER: Oh yes, definitely.

CHAIRWOMAN TANNER: This is really a key question.

MR. BAUER: It's very real. When we see that an unsuccessful permitting campaign results in a somewhat positive response, and that in effect is an encouraging sign, I have some difficulty with that because that encouraging sign cost somebody in private industry a whole hell of a lot of dollars just to get encouraged, and there are not many people willing to go there.

I think the bottom line today and the thing that bothers us in the industry the most is that what we're seeing, we don't feel is technically the best. We feel there's a lot of politics in it. We found over the years that on technically based solutions, we can go into the money marketplace and we can get funding. We find that if it is politically motivated, the funding is not there and we're very concerned about that. In effect, we're against the absolute bans of anything as a way to go. We feel that technology is there to accomplish most of what's been stated, and we

don't feel the ban is the right way. After all, somebody's got to go out and do it regardless of whether it's good to be good and it's nice to be nice, you still have to basically found it on economics and in this state permitability. If you can't get the permits, you can't do anything.

Landfills are on their way out. I've heard any number of statements today. A random study shows all of them failed. I would have to say that if you have six inches of rain you were sitting on a car structure. I would say you would fail categorically, too, and randomness doesn't mean anything to us. What it means is those specific facilities, the one that I am offering that I don't think it failed and, I'll tell you starting from scratch, I could not demonstrate that it had or had not in three weeks. I might be able to in a year. That's reality. We would ask as an association to stay involved in the process. We feel that there has been a lot of success in the California legislative process in the last two years and we feel that it has been a result of the administration and the Legislature basically walking hand in hand in a tough issue that's not popular and taking the political heat that goes along with doing the right job. The last few months, we're not sure that's happened. We feel it happening again and we want it to happen. We would ask you to ask that these people in OAT and DOHS report back to you after their workshop hearings in February with their findings and their direction in a formal way and that's what we would like.

CHAIRWOMAN TANNER: Well, we certainly would appreciate that, and I would expect that we will.

MR. BAUER: Well, I hope you'll participate in those workshops. Attend them. I think that would be an excellent idea.

CHAIRWOMAN TANNER: Thank you very much, Mr. Bauer. Were there any questions?

ASSEMBLYWOMAN WRIGHT: No, I like the idea. I was just hoping this committee could find its way to just insist upon the report back.

CHAIRWOMAN TANNER: Well, I think we can request that.

MR. STODDARD: You don't have to.

ASSEMBLYWOMAN WRIGHT: We don't have to? You got the message?

MR. STODDARD: We got the message.

ASSEMBLYWOMAN WRIGHT: O.K.

CHAIRWOMAN TANNER. Ah, well, this is a name we've been hearing a lot, Kazarian. Ken Kazarian from the BKK Corporation.

KEN KAZARIAN: Madam Chairwoman, honorable committee members. My name is Ken Kazarian. I'm Vice President of BKK Corporation. We're pleased to have this opportunity to comment on Alternatives to Land Disposal of Hazardous Waste and, specifically, on the recent assessment of alternatives published by the Governor's Office of Appropriate Technology. We're in the business of transporting, treating and disposing

of hazardous waste. BKK operates on a permitted Class I landfill located in West Covina, California. Also, it has a permitted hazardous waste transfer station in San Diego, California, where neutralization of corrosives has already been accomplished since 1979. In the waste management industry for more than four years and at every stage of its developments, BKK has endeavored to employ state-of-the-art technology. We're now in the advance planning stages for a new hazardous waste treatment facility in Wilmington, California, which will treat up to 70 percent of the hazardous waste currently going into our landfills. At this time, it would be appropriate for us as an industry representative to commend this committee for its unanimous support during last year's legislative session of Senate Bill 501, which assures that the remaining Class I landfills in California will continue to exist. This will permit adequate time for the development of new technologies which will de-emphasize landward disposal by trading, neutralizing, and dewatering these wastes so that the volume of residues directed towards the land are much smaller and in a more stable state. Our treatment facility would be located in a heavily industrialized area in the City of Los Angeles adjacent to an existing solid waste transfer station now owned and operated by BKK.

To the credit of the Governor's Office of Permit Assistance, the City of Los Angeles and the State Department of Health Services, progress on obtaining the necessary permits has been very encouraging. If the permitting process

is as expeditious as we anticipate, construction of our treatment plant is expected to be completed in the first half of 1983. Giving us direction at BKK, it should be apparent that we generally concur with the OAT assessment and intend to do everything we can to comply with the Governor's order calling for a ban of untreated highly toxic waste from land disposal. We do, however, wish to make several observations on the feasibility of what the state is attempting to accomplish based on our experience in the industry.

First, we do not believe it is responsible or reasonable to expect that secure landfills will no longer be needed, nor do we believe that the OAT report or the Governor's Executive Order are premised on a total phaseout of secure landfills. For example, the solid waste material which will be a by-product of BKK's treatment facility, although rendered chemically neutral, should still be placed in a secure landfill to reduce liabilities. The point of the OAT report is that many wastes that are presently being landfilled could be economically neutralized prior to landfilling and in many cases avoid disposal completely, and we agree with that assessment.

We would also observe that the OAT report properly pays close attention to the economics of moving to alternative technologies. Some technologies such as incineration are substantially more expensive to implement than other technologies such as waste water treatment. We're convinced that the most successful approach to handling the hazardous

waste generated in California will be the one that involves the least cost to generators. Regional treatment facilities located in industrial areas that provide a range of treatment options will provide the least cost alternative. Thus, waste that can only be safely disposed of through incineration will be incinerated. Others that can be similarly dealt with through the use of the most appropriate technology available at the least cost will be used, and large generators and small generators alike will benefit from the economics of scale and keep their cost down. Perhaps the most important part of this is the regional concept offers the best opportunity to move quickly towards this solution.

In completion, we believe the OAT report will be a valuable resource for legislators and the business community on making decisions about reducing the amount of hazardous waste that need to be placed in landfills. Although the administration may appear to be moving abruptly away from landfills, it has been our experience today that OAT and the Department of Health Services do not intend to totally ban any substance to landfilling without a proven alternative. The administration's effort to assist industry in developing these alternatives through technical advice, financial incentives and expedition of permitting demonstrate that attempt. We'd like to take this opportunity to thank you to provide these comments and we'd be pleased to provide any answers that you find are necessary. Thank you.

CHAIRWOMAN TANNER: Thank you very much.

ASSEMBLYWOMAN WRIGHT: Could I please ask him a question? This new facility that you're working towards, this is going to be alternative technology?

MR. KAZARIAN: Yes.

ASSEMBLYWOMAN WRIGHT: Of what type?

MR. KAZARIAN: We're going to be basically neutralizing and dewatering the waste and putting the materials which contaminate the solutions that are now going into the landfill into a more chemically stable site, or stable state. We should provide about a 90 percent reduction on many wastes.

ASSEMBLYWOMAN WRIGHT: And is it your location which you're talking about where you're going to have this plant? Is it in regards to where most of this waste is being generated, and could you just give us one example of what waste you're talking about?

MR. KAZARIAN: O.k., that was two questions. First one. Our site is located in an area that geographically generates about 66 percent of the waste now being generated in the Los Angeles area. We're going to be handling everything from high concentrated acids down to many of the oily wastes being generated and disposed of in the Long Beach area.

CHAIRWOMAN TANNER: So in the long run, the waste that will be disposed of in the West Covina site will not be the toxic variety.

MR. KAZARIAN: Right. We expect right now to be treating 70 percent and with some other studies we have

going on right now in engineering, we feel that we may be able to get up to somewhere around a 90 percent number as far as treatment of waste now going into the landfill.

CHAIRWOMAN TANNER: Within how long?

MR. KAZARIAN: Oh, the 70 percent number, if everything goes by the clock, we're hoping the first half of '83. To hit the 90 percent number, it may take a little longer.

CHAIRWOMAN TANNER: Have you -- your permits are all settled...

MR. KAZARIAN: Well, by no means are they settled, but we look forward to having a cooperative effort with all the agencies. We've met with every agency so far and don't see any red flags at this point in time.

CHAIRWOMAN TANNER: All right. Thank you very much.

MR. KAZARIAN: Thank you.

CHAIRWOMAN TANNER: Paul Abernathy from the Chemical Waste Management Company is our next witness.

PAUL ABERNATHY: Thank you, Madam Chairman, and members of the committee. First of all, my name is Paul Abernathy. I'm responsible for the development of new hazardous waste facilities for our company, and I'm also a member of the Department of Health Advisory Committee on siting criteria for hazardous waste facilities in California. I had previously submitted some testimony, so I won't read anything. I just think some few comments are in order

regarding some things that I think now require a focused effort on all of our parts. First of all, I think there's been a general agreement here today that there are alternatives available. I think there is also a general agreement that our industry, that is the outside waste management industry, is ready to implement those alternatives. Mr. Kazarian just said that he expects all his permits soon, and I would say that on the number of projects nationwide, our company and virtually every responsible member of our industry has very little difficulty achieving all of the needed technical permits for any project.

ASSEMBLYWOMAN WRIGHT: There's little difficulty?

MR. ABERNATHY: There's very little difficulty because we know that if we do not put forth a technically flawless proposal, that some regulatory agency, some water quality expert, or air quality expert, or health and safety expert, is going to find a flaw and is going to not grant a permit. But what we can unanimously say is that none of us have successfully gotten a land use permit. Now I hope somebody can correct me on this but it's my belief that since in the post-RCRA era in the last few years, there's not been one successful siting attempt anywhere in the United States, or an off-site hazardous waste management facility, regardless of what technologies we're talking about. I wanted to part from landfills. Our company was the first firm, or one of the first firms in California to state -- yes.

ASSEMBLYMAN KATZ: You said not one permit for any

sort of waste management facility in that category. Then I assume you're talking about what BKK is talking about?

MR. ABERNATHY: No. My statement is that to my knowledge, there's not been one hazardous waste facility, off-site facility, now I'm talking about successfully sited anywhere in the United States.

CHAIRWOMAN TANNER: What about the facilities that Mr. Kazarian was talking about?

MR. ABERNATHY: That is yet to be decided. He is going to.....right now, as are a number of other members of our industry. You heard Mr. Bauer talk about attainment of permits in Louisiana. Our company is involved in several other states as well and what I'm saying is that there are numerous members of our industry who are going through this exercise.

ASSEMBLYWOMAN WRIGHT: Then they don't have a land use permit?

CHAIRWOMAN TANNER: Oh, I'm sorry.

MR. ABERNATHY: ... that was -- BKK does not have --

ASSEMBLYMAN ELDER: BKK does not have a land use permit?

MR. ABERNATHY: Well, that remains to be seen.

ASSEMBLYMAN ELDER: No, I mean right now.

MR. ABERNATHY: No, I can't answer the question.

ASSEMBLYMAN ELDER: Mr. Kazarian's here, but let me say that as far as I understand it, they have been operating in transporting and as a transfer station, a

related kind of use at the present site for some time. They're not proposing to build a new one. I think basically what they're doing is going in for a land use modification or some other appropriate euphemism, so I don't think it's quite the thing as what you said. Your statement still stands in terms of going out and getting something brand new.

MR. ABERNATHY: That's correct. And those facilities, which hopefully can be grandfathered in under some existing use permit, I extend my congratulations to them.

CHAIRWOMAN TANNER: I think Mr. Elder has a question.

ASSEMBLYMAN ELDER: Yes, I think there has been one facility sited in California, in fact, and I think it was an IT facility in Westmoreland which was a Class II facility and Dave Bauer from IT could probably substantiate that. I'm sure they have another facility. The fact that Mr. Abernathy doesn't know doesn't necessarily mean we don't have any.

MR. ABERNATHY: As I stated, I'm pleased to stand corrected in this area. My point is still valid. It's a land use issue and it's a local decision, and the most unpleasant subject if there's any local elected officials in the room, they can cover their ears, but the most unpleasant subject we can talk about is state preemption of that local authority and yet without some mechanism whereby a siting process which includes that local authority and yet still can

lead to the successful land use decisions for the development of some facility for some alternative technology, we may not ever get there. Now if this wooden lectern in front of me becomes kind of a magic wooden box in which one could place waste and in which there was no effluent and it would completely destroy and defy all the laws of physics, in order to site this wooden box somewhere, we would still have to have a storage capability and a transfer capability. Storage for waste prior to injection into this box and transfer of waste which can't go into this box to some other more distant site and yet to say today in California, one of those storage and/or transfer facilities has yet to be done successfully by anyone.

Now I guess my recommendation to this Committee is for you to get yourself involved as advisers to local elected officials since I believe the decisions still need to be made at that level, but that you not overlook the ultimate fail-safe mechanism of preemption.

In my written testimony, there was some discussion of a program that has currently been passed and legislated in the State of North Carolina, and I won't elaborate on that other than to say that there is a process in North Carolina which includes all appropriate local, state and federal regulatory agencies issuing all necessary technical permits pending favorable land use decisions. But, if anywhere in that process there is a breakdown, that is, if some local elected official says it's political suicide for me to

support this facility, then the state does have the authority by law to issue a favorable land use decision provided that all these other parameters have been considered. I offer that as an example. I'm not suggesting that the law be considered now.

ASSEMBLYMAN ELDER: Mrs. Wright has a question.

ASSEMBLYWOMAN WRIGHT: In talking about it being a local issue, I totally agree that the land use situation is a local issue, but don't you feel that publicity wise everything in this area has really been blown out of proportion and that the best thing is we're all missing it. I think industry is missing it, I think maybe the local government is missing it, and the state, and that is a true education of the people, so we know what we're talking about. I said that in the very beginning. I think if you're going to decide that you want to eliminate all hazardous waste and you're going to eliminate all landfills, then you're going to have to change your life style because if you don't, you're going to have to change your life style because, if you don't, you're eliminating some industries that make life a little better here in California.

MR. ABERNATHY: I think you're absolutely right. I think it has been blown out of proportion and I think that this committee needs to consider some statements made by one of the former speakers, Mr. Kaufman, because I believe that it is through statements like that that the thing tends to be blown even further our of proportion. When one looks at

some of Mr. Kaufman's statements about the leaky landfills around the country and then considers that in relationship to how to create a facility which incorporates the OAT technological approach, there is a big chasm and the public is in that chasm and, yes, it is through education that they can begin to see that not all facilities in the future are going to be those leaky landfills and yet, if in his travels around the country in Massachusetts or Moore County, North Carolina, not representing EPA, I might add, Mr. Kaufman scares people about all those leaky landfills. What is the likelihood of those people ever accepting a local land use decision favoring a site development. Mr. Katz, did you have a question? Mr. Elder's got a question.

ASSEMBLYMAN ELDER: In the case of Long Beach, it has come to my attention that your options with respect to the property where you talked about a transfer station expired on October 1, 1981. Is that a true statement as far as you know?

MR. ABERNATHY: The true statement is that we let the option go. I don't know the date.

ASSEMBLYMAN ELDER: So the option does not exist any further for your company?

MR. ABERNATHY: It is not our intention now or in the future to attempt to develop any facility, any co-hazardous waste facility, at that previously selected property.

ASSEMBLYMAN ELDER: Also, Mr. McKenzie is in another

division of your company or in another state at this time? Is that true?

MR. ABERNATHY: No.

ASSEMBLYMAN ELDER: I've been informed that that's the case and I...

MR. ABERNATHY: Mr. McKenzie is going to move to our corporate headquarters soon.

ASSEMBLYMAN ELDER: I see.

MR. ABERNATHY: He'll continue to be responsible for our developmental activities around the world.

ASSEMBLYMAN ELDER: All right. In respect to your written statement to the Committee, I read the statement and wanted to indicate that the City of Long Beach today on a vote of 7 to 2 made the parameter distance from residential property from one mile down to 2,000 feet and that was really at the instigation of the people who were opposed to your particular project because they didn't want to create a fire, a force for the preemption issue will not happen around here today and the Council showed a great deal of political courage in taking that recommendation and next week the ordinance will be read for the first time and so I just wanted to get that in the record at this point because your statement probably will become part of the record and you couldn't have known that when you prepared it, in all fairness.

MR. ABERNATHY: That happens. Mike Gagan indicated that there was a forthcoming decision and since I prepared

the statement, the Council did pass an ordinance calling for a one-mile buffer and today changed that to 2,000 feet.

ASSEMBLYMAN ELDER: With respect to the issue of the sphere of influence, which you also commented on in the written statement, the sphere of influence is a little bit more than you might imagine because the sphere of influence is definition determined by the Local Agency Formation Commission of Los Angeles County and it sets out what could be under optimal circumstances, which are never really resolved, as far as the division of 1,800 acres of prime industrial property for annexation purposes between the cities of Carson, Compton, and Long Beach. So the area that they're talking about is within the sphere of influence of Long Beach for that local agency determination, which I have to guess for the City of Long Beach about 1973, so...

MR. ABERNATHY: My point in my statement was that if real estate in the sphere of influence in the city is to be considered for a site, in this case it is the County of Los Angeles and not the City of Long Beach, which controls the land use decisions.

ASSEMBLYMAN ELDER: And for the record, I also offered to go with you and Mr. Kinney and anybody else with your company to the supervisors to try to get an accommodation of the transfer station issue in that particular case away from residential developments and that regretfully did not come to pass and perhaps in hindsight that might have been a good idea.

MR. ABERNATHY: You're right, Mr. Elder. At that time, I welcomed your support and I continue to do so. I'm trying, at this point, to not be specific about a site in a town because, as Mr. Bauer pointed out, the realities of life are that there is no place, there is no town, which has yet to demonstrate that they want to be that magical somewhere else for everybody else's waste.

Now in the case of Long Beach, even a 2,000 foot border zone for a treatment, storage or transfer facility may not be a realistic border zone. I cannot address that. It is relatively an arbitrary number based on a previous bill for a disposal site. So I guess my point is, if we're going to do things on an arbitrary basis, they're not going to get done. Facilities are not going to be sited.

Finally, I'll mention again that I see the role of this Committee and this Legislature as that of providing assistance, education and advice to those local decision-makers who have to put their own political careers on the line when they render that favorable land use decision.

CHAIRWOMAN TANNER: I think that's the main point and local government is having to deal with that. We still have an audience. I can't believe it. Our next witness is George Weiner, Director of Corporate Development, Western Region for SCA Chemical Services, Incorporated.

MR. GEORGE WEINER: Madame Chairman and members of the Committee. My name is George Weiner, Director of the SCA Chemical Services in San Jose, California. I would like to

thank you for the opportunity to present the views of SCA Services on the Alternatives to Land Disposal of Hazardous Waste as prepared by the Office of Appropriate Technology. Can you hear me?

CHAIRWOMAN TANNER: Yes.

MR. WEINER: By way of introduction, SCA Chemical Services is a division of SCA Services, Inc., headquartered in Boston, Mass. The company has two operating entities:

The Solid Waste Division, representing 85 percent of the company's operation, which collects, transports and disposes of residential and commercial refuse in sanitary landfills in 35 states. Operations in California include Orange and San Diego Counties, and Sacramento.

The Chemical Service Division has several operating facilities, predominantly on the Eastern Seaboard. These include secured landfills in Model City, New York; Pinewood, South Carolina and Fort Wayne, Indiana. Major chemical waste treatment facilities are operating in New York, Massachusetts and New Jersey. Chemical waste treatment plants in various stages of permitting or construction are in Charlotte, North Carolina and Memphis, Tennessee. A modern thermal destruction unit capable of incinerating solid and liquid wastes, including chlorinated hydrocarbons, is in the start-up phase in Chicago, Illinois. The SCA central research facility is in Buffalo, New York. It is fully equipped with the latest "State of the Art" analytical tools and is staffed with highly trained technical personnel.

Now, I would like to direct my comments to the OAT report and, in general, the technical feasibility of the State of California's hazardous waste program.

CHAIRWOMAN TANNER: I wonder if I could direct a question to you. Could you address the matter of economics, alternative methods versus landfill? Could you address that at all?

MR. WEINER: Yes, this is part of the thing. I have four areas and that's one of them.

CHAIRWOMAN TANNER: Good.

MR. WEINER: We feel there are four areas of importance for the Committee to consider during the deliberation on the OAT report. These are the availability of high technology to properly process toxic waste, the achievability of the time schedule in the Governor's Executive Order, the cost comparison between land disposal and treatment and, finally, what other states are doing regarding waste treatment.

High technology in both the form of incineration and chemical treatment is available and it is proven operationally. For example, our company has several years experience with recovery, treatment and detoxification of many different liquit waste streams in our Neward, New Jersey facility, as well as at our Western New York operation. In addition, the technology of detoxification and materials recovery has been used in several commercial facilities in this country and in many European countries for a number of years. The point, as the OAT report recognizes, is that there is technology

available today to provide a working alternative to land disposal of waste.

As you can see by our list of facilities, we have a mixture of incineration, chemical treatment, recovery and secure landfill operations. However, it is our philosophy that our future in the chemical waste business will be a highly technological approach with emphasis on treatment, recovery, detoxification and thermal destruction. We plan, that in the long term, our secure landfills will be used only for residues from our treatment processes.

You will note that our operations in the chemical waste area are all east of the Mississippi River. There are good reasons for this. Alternate technology could not be economically competitive with the unusually low landfill disposal costs that now exist in the California market. The existing California waste market, in our judgement, consists of chemical wastes suitable for treatment and incineration technology that we have been practicing in the eastern part of the United States. But, until the Governor's Office of Appropriate Technology prepared the report which we are discussing here today, and made recommendations to phase out land disposal of hazardous waste, we could not economically justify an investment in developing high technology waste processing facilities in California. This report and the Governor's Executive Order have resulted in SCA actively looking for a plant site or sites for treatment and recovery facility.

The second area is the achievability of the time schedule proposed in the Governor's Executive Order phasing out land disposal of hazardous waste. We believe the schedule is workable, provided regulatory agencies develop an itemized approach to implement the program. Presently, there are solvent recovery and treatment facilities in California which are not operating at full capacity. Those should have no problems achieving the report's objectives in eliminating land disposal of certain solvents and chemicals. Where new plants are required, it is our judgement that it will take approximately two to two and a half years to permit and build the kinds of facilities needed to complete the Governor's Executive Order.

The third area that I would like to comment on is the cost of treating and recovering chemical wastes in lieu of land disposal. There are two types of costs that need to be discussed whenever one wants to have a dialogue on high technology processing versus land disposal. The first cost is the one that we can most easily quantify, which is the cost per gallon or per ton of processing. The other is the long-term environmental cost which is not easy to pin down. Our review of the numbers which appear in the report lead us to conclude that the costs attributed to both incineration and treatment are excessively high. For example, the average cost that we charge a customer for treating hazardous waste at our facility in Newark, New Jersey, is 20 percent less than the cost which the report attributes to chemical oxidation-

reduction. The average cost which we propose to charge at our Chicago incineration facility is 70 percent lower than the average cost attributed to incineration in the OAT report. I should also point out that we are in the business to make profit, and that we can make a profit and still have costs that are substantially less than the report indicates. Furthermore, there are the long-term environmental costs of treatment versus land disposal. These are the costs of land disposal facilities monitoring and maintenance, the cost of potential damage to the environmental and ground water supplies, and the unknown cost to our public health and welfare. Therefore, when a company like ourselves evaluates costs in its true perspective, it is clear that high technology is more than competitive with land disposal.

Finally, I think I would like to provide you with examples of what some other states in which we presently operate have done concerning the question of land disposal of hazardous waste. In New York State, the Department of Environmental Conservation has required commercial operators of landfills to build and operate high technology treatment and disposal facilities as a condition to obtain permits for additional land disposal capacity. They have also established regulatory guidelines like the State of California, which prohibits the land disposal of highly toxic materials. The Governor of the State of Illinois has issued an executive order which prohibits the land disposal of toxic wastes by 1985. The State of New Jersey passed a law last year which

serves to prevent land disposal of hazardous waste unless it can be totally recovered from any such facility. The State of Michigan has stated in their hazardous waste regulations, that land disposal shall be the "technology of last report."

In summary, we totally support the plan developed by the Office of Appropriate Technology and believe that the State of California, which prides itself on its development of high technology industries, will lead the way to practice advanced waste treatment, recovery and thermal destruction processes.

In closing, I would like to offer my own personal observations and opinion on the subject. During the infancy period of the Electronic and Semiconductor Industries in the 1950's and 60's, a great deal of valuable scrap material, containing gold and other precious metals, has been discarded. Some was dumped into the San Francisco Bay. Others have been taken to sanitary landfills. Then some entrepreneurs came along, reclaimed these valuable metals and recycled them to the generators. Very profitably!

I was involved in cases when electronic companies actually paid to have their valuable precious metal bearing materials hauled away. Now reclaimed precious metals yield millions of dollars of revenues to industries in the Silicon Valley.

There is a similarity to what we are facing now with regards to industrial by-products, that we also call "hazardous wastes."

I do not claim that solvents, chlorinated hydrocarbons or smelly metal sludges are as glamorous as precious metals. They do, however, represent valuable resources and scarce raw materials, which take labor and energy to produce. When our children look back to our times, they should be able to say that through the joint dedicated effort of the public and private sectors, and academia, we had turned the 1980's into the decade of conservation and resources recovery.

Thank you.

CHAIRWOMAN TANNER: Thank you very much.

ASSEMBLYWOMAN WRIGHT: I just wanted to ask you, you said there were possibly two and a half years for the permit process?

MR. WEINER: It takes about a year to construct a plant from the first shovel full of dirt, and about a year to a year and a half to get the various permits.

ASSEMBLYWOMAN WRIGHT: Well, isn't that an additional cost then to what you projected for the overall cost of the alternate technology as compared to the... Well, one of the areas right now, we know we're not going to sell anymore landfill so that's out of the question, but in comparison to what it costs now to go into a landfill and compared to the time, two and a half years approximately, and the cost of going through a permit process and I thought you said that actually alternate technology is cheaper than landfill.

MR. WEINER: Alternate technology is cheaper than the cost of landfills. For instance, in eastern states, New

Jersey in particular, you're not going to landfill material. If the regulation is accepted, that's the Governor's order, Executive Order, that 50 percent or 75 percent of the materials cannot be put into landfill. That material has to go somewhere.

ASSEMBLYWOMAN WRIGHT: My concern is when you come down to the Executive Order, you don't have this in place in two and a half years. If they didn't have anything in place today, my concern is that it's going to end up as illegal dumping and not going into landfill and going into alternate technology.

CHAIRWOMAN TANNER: I think the schedule addresses those problems. It isn't saying the court or the Governor's Executive Order does not say tomorrow there is a ban. There are time schedules and I think that those things are being considered. I was, you know, because throughout the day we haven't heard any comparison in landfill, the cost of landfill, as opposed to landfill rather than other methods and you know if it can be done economically and is available.

MR. WEINER: There is one other cost they do not mention anywhere in the report, and that is delivery of material, transportation. I was involved in hazardous waste transportation company, and here for Northern California it costs at least as much or one and a half times as much to actually transport than to dispose.

CHAIRWOMAN TANNER: But it would cost that much to transport to a facility for treatment.

MR. WEINER: No, because you're talking about the facilities where the generators are. Our plant is to -- there are two plants, one in Northern California and the Bay Area, and one in Southern California. Going to Southern California we're talking about a 200-mile, 400-mile round trip, which costs_____, so nobody wants to stop on the highway. I'm operating trucks and that is a hidden cost and something that should be considered.

CHAIRWOMAN TANNER: Thank you very much. Gary Kovall from ARCO is our next witness.

MR. GARY KOVALL: Madame Chairman, I have a number of copies of prepared testimony. I'm going to try to summarize.

ASSEMBLYWOMAN WRIGHT: More reading material, That's what I need.

MR. KOVAL: To focus in on a couple of issues. My name is Gary Kovall. I am Manager of the Environmental Legislative and Regulatory Affairs for ARCO Petroleum Products Company, which is a division of Atlantic Richfield Company, a division concerned with petroleum refining and marketing. I am here today to speak for Atlantic Richfield Company, in general, for all of its operations and also by way of introduction I would like to call to the attention of the Committee something peculiar about my role after some 17 enumerated presenters here that I'm the only one representing precisely the kind of company, precisely the kind of operations that are going to be impacted by the OAT Department and by the

administrative implementation of that.

I represent a company which is a waste generator in California and only a waste generator. We're not waste management and also I'm not speaking from an industry-wide perspective but from ARCO. What I'd like to share with you is my honest reaction, our company's reaction to the OAT report, to the administration and implementation of that report, to some of the things that we're which I think will demonstrate that we're committed to the very issues that are raised in the report and, finally, to some full recommendations for this Committee of the Legislature, what you ought to be doing, what we think you ought to be doing and, first of all, I want to say that I really applaud this Committee holding this hearing. I think it provides a non-confrontational, non-adversarial way to discuss a lot of the issues, and I do have fears and I know I expressed to Madame Chairman that, had the workshops been held in a couple of weeks without the opportunity for this hearing, I feel that there would have been adversarial.....

To get back to something Assemblywoman Wright said this morning, shortly after this began, it seems like this morning, she said that an Executive Order has put the whole thing in an adversarial setting and I agree with you and this is giving us an opportunity and certainly there has been a lot of contention here today. It certainly gives us an opportunity to address some of these things in a rational way. I think the OAT report, we think the OAT report at Atlantic

Richfield is an excellent first step, precisely what it says it is, precisely what Peter Weiner shortly after lunch said it was. He said a responsible first step toward addressing the issues of enclosure and bringing into play alternate technologies in handling hazardous waste in California. That's what it is and to the extent it makes recommendations, a number of recommendations, I'm here to tell you Atlantic Richfield supports those recommendations. Clearly, we support the goal that we ought to reduce our dependence on landfilling and land disposal techniques. We don't think it's smart business to emphasize land disposal and the alternate solutions to handling hazardous waste which is a necessary by-product of our industrial activities.

The OAT report makes several recommendations. They talk about encouraging construction of alternate facilities in terms of waste reduction, categorizing waste based on a degree of risk, further developing a data management system, addressing local government responsibilities regarding management and land use of waste. Encourage cooperative research and that, I hope, will be the message I really convey. We need cooperative research, we don't need this adversarial situation any longer and, finally, streamlining the permit and the approval process in California.

I don't agree with the administration people who say you can site a facility in one year. I just frankly do not agree. One of the materials which we have, that I've passed out with the prepared remarks, is a report which was prepared

by the Engineering Sciences of Arcadia last year. Atlantic Richfield had it prepared to study the permitting process. Admittedly, it was to study the process for putting a landfill in Los Angeles County and I believe three other counties in the state. However, I am convinced that process is descriptive of putting in anything in any of those counties. It's the same problem.

In Los Angeles, you have 26 different agencies and local units of government who have to give some sort of review and approval. There are at least five different public hearings. There is a CEQA process and there are a million opportunities for judicial challenge at any and every stage to frustrate any well-designed project, whether it be an incinerator, a detox station, or a transfer station. They all can be frustrating, especially with the public's perception of what any hazardous waste management facility is, what does it mean. And I think Assemblyman Elder would say that the transfer station in Long Beach was certainly as controversial as perhaps trying to put a landfill in some other county, or some other city.

So we think the OAT report is an excellent, excellent first step. It's got a lot of good technical information. It's a great companion of a lot of information and we think the OAT report calls for more study. It calls for regulatory action. It calls for taking further steps. However, this is where we really take exception with what the administration has done. We don't think it calls for a precipitous ban on

any kind of waste management technology currently being used in the State of California. To begin with, it doesn't assess what the environmental social regulatory economic impacts are of those alternatives. It just doesn't give a fair assessment. We talk about perhaps further travel. I think the gentleman that was just up here talked about the dangers of trucking waste over the highway and over the Grapevine, wherever you might have to take them out of Los Angeles County, for example.

The environmental impacts of an incinerator. One of the things the OAT report calls for is a joint cooperative effort between the ARB and the Department of Health Services to find a joint policy statement for incineration in California. Now, if that has happened, I'm not aware of it, and I'm not sure that even if they have a policy statement given the practicalities of the Air Resources Board in California and the Clean Air Act, and the offset policy, and the construction ban and all the other problems we have in the Clean Air Act that you could put an incinerator in. I'm not convinced it can be done, at least not in those precise areas that perhaps require an incinerated handled waste as an alternative to what they're currently doing. So we do not agree with any type of precipitous ban on land disposal.

However, I'm not here to sing praises for land-filling. That's not my mission, but I think what we have do do is look at all the facts, all the technologies, the economic impact, the social regulatory arena that you have to put these things in and begin moving forward under a sense of real

cooperation to find out what these things are and what we can do to encourage, truly encourage, alternatives within the marketplace concept that I think the fellow from Dow referred to earlier. We feel that's the appropriate way to go and we're doing it because of the marketplace concept. We're not doing it because the Governor or anyone else in any other state told us to do it. We think that's responsible business and the marketplace is driving us there. So it's important to recognize that a lot of these things are happening. Perhaps they're happening more rapidly in a corporation like Atlantic Richfield, which certainly has a lot more wealth than a lot of small companies, but nevertheless they are happening and to the extent some of these things are not proprietary and few of them are, those ideas will be released to the marketplace.

We have no intention of secreting these things to ourselves as our way of doing business. So what I think the OAT report really does is it asks for, it really begs for, more analysis of economics, the social regulatory technical questions that the report raised. Reading it, I didn't find that it came to any firm conclusions. I certainly didn't think it justified a simultaneous ban on landfilling, which was released at the time of the report. It called the regulatory agencies to have hearings to study these things, consider a prospective ban on certain types of waste. It didn't even clearly define what a high priority waste was. Management came to me and they started asking me what does this mean. I honestly didn't know and now I have a little

bit better idea since I've seen the discussion paper for the workshops, but I still don't really know what a high priority waste is and what it means to our operations, whether it's going to have a dramatic impact or perhaps a minimum impact.

One issue that, well, one technical issue in the report that I feel certain barely singled out the oil and gas production industry in California. Muds and vines are sort of singled out. Muds and vines are singled out early in the report as being a major contributor to the consumption of landfill capacity in California. Later on in the report, the report quite accurately states that there are no real alternatives to alternative technology to dealing with the thrilling muds and vines issue. I think that's right but this is sort of indicative of a problem we have here in California that we don't have in the other 49 states. California has definitions of hazardous waste which far exceed any of the federal definitions. For example, drilling muds and vines are not hazardous waste under the Resource Conservation Recovery Act. Grant, I will admit to this committee that they are subject to a study which is currently ongoing under the auspices of the American Petroleum Institute, WOGA, Western Oil and Gas Association, with EPA, and there will be some determination made at a later date perhaps to include those as hazardous waste when that report is done. At the time, we don't necessarily see that happening. Nevertheless, California has an incredibly broad spectrum of material that they deem hazardous waste, and we're convinced a lot of those

things which are currently being taken to landfills are needlessly taking up landfill capacity, Class I landfill capacity, when they don't have to. They're not hazardous waste, at least under federal law, and they perhaps shouldn't be under California law. And getting away from having it listed as hazardous waste in California is a rather arduous task. It's very difficult and it's only been done with success very few times. Even by relatively wealthy industries like the oil industry.

Another thing that's got to be understood is the nature of hazardous waste. Where did it come from? Hazardous waste really, the reason it's gotten such great attention just recently is it really is a major by-product of the incredible effective air and water pollution control requirements we've had put on this country increasingly since 1970.

For example, at our Watson refinery in Carson, California, near Long Beach, 60 percent of the hazardous waste generated in that refinery is the direct result of air and water pollution control equipment in the refinery. Sulfur, elemental surfur is taken out of the fields and is ultimately reduced to an elemental sulfur. Water pollutants are taken out. The point is that 60 percent of the hazardous waste coming out is just because of the air and water pollution control equipment. I'm not suggesting that we take that equipment off and we begin to put it back into the air and water, but I'm suggesting there ought to be some sensitivity even in the OAT report for that fact and it quite frankly

isn't very well dealt with. It isn't even addressed and it's something you know I think has to be recognized that we've been doing an awfully good job in industry and any government, any society cleaning up the air and the water, and the result of that has been this massive weight which now we've got to find something else to do with and now we're being told we can't landfill it and the point is that the technology that develops because of air and water pollution requirements can and will and is developing with regard to hazardous waste management, and I will get into that without wasting anymore time in introduction.

I'd like to tell you what we're doing within Atlantic Richfield. To begin with, we have also looked at some European state-of-the-art hazardous waste facilities. Last summer the individual in our company who has been responsible for getting all the air water pollution control permits, quickened requirement, etc., at our Watson refinery in Carson, went to France to look at two state-of-the-art facilities. One was an incinerator, the other was a neutralization detoxification stabilization facility. One thing that's important to recognize is that all of the state-of-the-art facilities in Europe use landfills for the residuals that they create. Dr. Stephens did not say that. The ones in Denmark use landfills for the irreducible amount of waste. They do. Denmark has unusual problems which also weren't suggested. Denmark needs -- it takes 95 percent of its drinking water from ground water because of its hydrology and

geology of the country. They don't have service water to get the drinking water. They are very sensitive about what's put on the earth but they do have landfills, and just to kind of wrap up this point, it seems such a misleading sense in the OAT report that somehow your office figured this all out how to handle waste and not use land disposal as a necessary incident to that.

I do not have the letter with me but I'd be glad to submit it to the Chairman and this committee, but there's a letter which has been prepared by the Canadian government for the North Atlantic Treaty Organization countries on how hazardous waste is handled in the NATO countries, Canada and the United States but, more importantly, it includes a very detailed description of what all the European countries are doing. This is a quote: "Landfill is almost universally adopted as one of a number of acceptable options for waste disposal, and it generally represents the major element and the overall disposal strategy. Continued use of landfills to varying expense seems to be a generally accepted principle in all participating countries." That's a quote from a NATO document which was prepared to review waste management in Western European countries. They haven't figured out how to do it without doing something on the land, and again I'm not here cheering landfills, but at the same time we have to recognize that there will be certain materials that will have to go to some sort of land resolution, I guess...

CHAIRWOMAN TANNER: I don't think the OAT report

questions that at all.

MR. KOVALL: I found it didn't seem to emphasize that. I was misled when I read it and I just did not seem, I didn't think it gave real...

CHAIRWOMAN TANNER: I don't think the OAT report prohibits landfills.

MR. KOVALL: It does not, but it's being used to prohibit landfills. I agree.

CHAIRWOMAN TANNER: The Executive Order doesn't prohibit landfills.

MR. KOVALL: The...well the necessary implementation of the Executive Order, I think, will prohibit landfilling, and I find the workshop which is being held in February seems to have already decided that landfilling in a number of ways is just going to be prohibited and we the generating industry will now come in and basically try to prove why it not ought to be and it seems to me that the regulatory burden ought to be able to show why there's an environmental risk, why this is a risk of health and safety welfare before we're called, and again I'm not arguing for landfills, but they're being singled out and I think the point that was raised earlier that we don't know where the regulators are going and right now we're talking about a few of the things we're doing within our company to look at alternatives.

In our Watson Refinery, of course, we use sulfuric acid to treat the octane gasoline. Sulfuric acid is recycled by a company who regenerates it and sends back virgin

sulfuric acid. That's a process that's been in place a long time. We are reusing recovered oils from even pollution control equipment. We're putting them back into the processing equipment and recovering valuable controlling parts. We have a unit which is called a fluid catalyst cracking unit. and this is a fluidized bed of catalyst. The catalyst ducts, which normally would be disposed of as a waste, are now being given to a concrete manufacturer who uses it in concrete as an extendant. It, therefore, is no longer a waste to us and it's a valuable product to the concrete manufacturer.

The sulfur which we recover is being sent to a chemical firm that produces fresh sulfuric acids, and the sulfur which comes out of the petroleum, and the products that we produce ultimately end up as an element on yellow sulfur and it's converted into sulfuric acid and used in other beneficial industrial processing. We have a 1981-82 research project...

CHAIRWOMAN TANNER: Do you have a great deal more testimony?

MR. KOVALL: No, I'm almost finished. We have a 1981-82 research project at our Harvey Technical Center in the south side of Chicago where we are spending nearly a half a million dollars to conduct the alternate technologies for the petroleum industry and what to do with the wastes besides landfills, and that's actively ongoing, and we're looking at retrofed, economics, all these types of issues which we think have to be looked at. And, finally, I would just say as a

recommendation, we really feel that a major cooperative effort between industry, government, public interest, and environmental interest groups really has to be undertaken. Perhaps one of the vehicles, certainly it contains a lot of the elements that would be required, is AB 1543, the Management Council and the things that it's supposed to look at, and I'd like to recommend that and possible other ideas to this committee and to the Legislature so we can get on with this study.

CHAIRWOMAN TANNER: Thank you very much. I think that this hearing is really valuable. I feel that we've learned a great deal. Thank you very much.

MR. KOVALL: Thank you.

CHAIRWOMAN TANNER: Mallory May is our next witness and Mr. May is Vice President, Environmental Affairs, Gifford-Hill and Company, Inc. Following Mr. May, we have two more witnesses and then we'll be able to close up.

MALLORY MAY: My name is Mallory May. I'm Vice President of Environmental Affairs of Gifford-Hill and Company, the owner and operator of Riverside Cement Company located in Southern California with two plants, one that we call Crestmore in Riverside, and one we call Orgran, and Orgran is in the desert near Victorville. We also own and operate companies in South Carolina, Texas, Arizona, and Michigan. We have burned a supplemental fuel of hydrocarbons, organic hydrocarbons, in some of these cement plants. In South Carolina, we've burned halogenated or chloronated hydrocarbons. In

Texas, we've burned waste oils, and in the Peerless Cement Company in Detroit, Michigan, which we acquired in an acquisition, a halogenated hydrocarbon was burned as a test there. This particular one happened to be PCB's. The reason I am here is probably twofold: one as a representative of my company and, secondly, as a representative or at least speaking with some agreement with several other companies in California to express some of our agreement, and some of our concern regarding the use of cement kilns as a means of disposal of "hazardous waste."

I would like to make reference to hazardous waste in two categories. One as hydrocarbons that are waste from some process that are uncontaminated with other material such as chlorine or heavy metals. In the report they refer to these as non-halogenated volatile organics. Now I think those will be very similar. I would be quick to say that these materials can be used as a supplemental fuel in any cement combustion activity. When I say as a supplemental fuel, I do not mean as a substitute 100 percent, but that in some percentage, and definitely there are some cement plants in the United States that are already successfully doing this there, and so there is no doubt that this can be done. It is just another hydrocarbon that has BTU value and is no different from other types of fuels and should be considered that way but, on the other hand, you then have a group of what I would call contaminated hydrocarbons that consist of chlorines and other halogens such as chlorines and bomides and things of this sort, and

heavy metals.

I would like to say that we understand and know an awful lot about the process of combustion in the cement kiln and say here that it is possible to incinerate these materials in a cement kiln. However, it cannot be done as simply and as easily as I have suggested that you can burn the non-chlorinated materials and that in many cases it has to be determined on a case-by-case basis, based upon the composition of the contaminated materials that are on the inside of the hydrocarbons or either bound with them. In each situation, this requires full understanding of mass balances, material composition, and the composition in the material that is to be incinerated. And in those cases, it probably cannot be burned as a supplemental fuel, but it can only be burned in a small quantity of materials because of the potential effects on the equipment and on the clinker there.

Now that I have basically made these technical comments, let me say that there is concern on the part of some cement kiln operators. For instance, Mr. Stoddard's enthusiasm for no liabilities and everything could be done without any problems, suggest the enthusiasm of a man who does not own a cement kiln.

CHAIRWOMAN TANNER: I was about to ask you to.

MR. MAY: There is considerable anxiety on the part of some cement kiln operators to get involved in this activity. Sociological reasons, economic reasons, the fact that they have their own processes operating effectively at

the present time and they don't want to experiment with any other methods.

Yet, on the other hand, there are other cement kiln operators that are very anxious to get into it because they see economic advantages. They see the opportunity to reduce their fuel cost, and those who are willing to even experiment with burning some of the contaminated materials see opportunity for increasing their returns on investments through charging to do this.

So what you have is a basic interesting mix of people that would be interested in doing this. Now one of the things you need to realize is that with a cement kiln, as you've mentioned in here, a wet kiln, a dry kiln, a suspension preheater kiln, each of these may be able to burn the uncontaminated materials without any problem. But depending upon the configuration of the equipment, the contaminated materials will affect either the equipment or the materials based upon another, a considerable number of parameters that have to be considered on a case-by-case basis.

I guess what I would suggest is that it is a business decision on the part of the cement industry and the individuals as to whether or not they would like to get involved in this sort of activity. I am sure that there are companies present in California that would welcome the encounter or the experience of dealing with people who have waste materials that they would like to get rid of, and that those companies would encourage contact and discussion of

joint ventures, as well as there are companies who will absolutely not discuss this matter. They are not interested at all.

I would like to suggest to the committee that there are several things that you could help us do in expediting the cement companies who are interested in considering this alternative technology for waste disposal by several things. First of all, OAT has proposed some alternative technologies. I would suggest that OAT or a similar organization investigate existing regulations with the idea of a regulatory reform that would bring about a more rapid utilization of these waste materials in cement kilns where it can be used as a supplemental fuel.

For instance, I think it is unnecessary for permitting procedures to take months merely to be able to burn some of the uncontaminated hydrocarbons. A company interested in doing that should be able to submit a proposal with the existing technical changes that are necessary, capitol investments, and almost get an immediate turnaround because they're not going to do anything other than burn hydrocarbons that are going to be burned the same way that hydrocarbons, fuel oil, and coal are burned. So there needs to be some help in this matter. You have a cement company in California who has been held up for months unable to get a permit because of the review procedures, and I'm sure that there has been a feeling that it has been necessary to go through these steps.

I can comment without any intention of being

derogatory of OAT or ARB in saying that their reports are a little bit naive when it comes to a high level of understanding of the cement industry's technology and taking that into consideration plus some of the hysteria that exists with waste disposal. You can see why there is a long lag in permitting, but yet on the other hand some help from them in regulatory form would be helpful.

Also, an effort to reclassify some of these wastes as non-hazardous in the case of being used as a fuel. They're only hazardous if they are disposed of in certain ways. There are existing fuels today that would be considered hazardous if you were discarding them but, if you were using them as fuels, they are not considered to be hazardous.

In one of our plants, we've sought to burn oil that had already been used for lubrication purposes, and we were required to become a waste handler, and we were required to then submit papers on the basis that we were a waste processor, a hazardous waste processor. We tried to convince them that we had just used the oil for one purpose, and now we had another purpose to use it for and that was to remove the BTU's from it. This was not in California, so you are frequently not the only state that is most stringent. Another concern that we have is the concern for liabilities. There are strict liabilities associated with the hazardous material and in some cases, even the ones that probably are non-hazardous, frighten some of us that 20 years from now, workers who get some sort of illness will tend to blame it on the fact that they handled some of

these hydrocarbons 20 years earlier and, as a consequence, will stick the companies with very large lawsuits.

In deference to the time schedule, I would like to conclude by saying that we, as one company, have been interested in considering the burning of supplemental fuels and hazardous waste. We have found the department or the Office of Appropriate Technology and the Air Resources Board to be very cooperative in this matter and very willing to talk with us about this, and we would compliment them on the fact that when we had our initial conversations with them, it was almost impossible for anyone else to find out that we were the company interested in doing this.

Now we're not the company that they have referred to today who is waiting to burn supplemental material -- that's a firm in Portland, but we have found them to be extremely cooperative. It's very difficult to do a report like this, and certainly it has inadequacies as have been brought out today, but I'm sure as a result of this meeting, some of these inadequacies will be amended and some improvements will be made there. I would say, in order to understand the cement industry's problems, that you should attach to this the report by the ARB on a plan for using cement kilns as a method for disposing of PCB's and eliminate the word "PCB" and talk in terms of chlorinated hydrocarbons here but, at least they have done a quite adequate job of describing our technology in that report. Thank you.

CHAIRWOMAN TANNER: Thank you very much. It was

interesting. From the American and Electronics Association, Glenn Affleck.

ASSEMBLYMAN KONNYU: A very important constituency.

CHARIWOMAN TANNER: Yes, I met him in your area.

ASSEMBLYWOMAN WRIGHT: Is he Hungarian?

ASSEMBLYMAN KONNYU: No.

GLEN AFFLECK: No.

ASSEMBLYWOMAN WRIGHT: How did you manage to get into his jurisdiction and not be Hungarian?

MR. AFFLECK: My name is Glenn Affleck and I'm employed by Hewlett-Packard. I'm here today to make a statement on behalf of the American Electronics Association. In California, American Electronics Association has over 1,100 members. Most of these small companies that generate small quantities of hazardous waste are somewhat overwhelmed by the detailed volume of hazardous waste regulations that they are called upon to obey. The electronics industry is particularly impacted by the ban of the Governor's on land disposal, and our sensitivity can be characterized by some data in the OAT report which points out that we only generate six and a half percent of what they call high priority waste, and so you can conclude from that that maybe we weren't very impacted by this thing but then, as we look at the categories of waste, I counted about a third of those high priority waste categories that we generate a part of. And so I would look at the electronics industry as a lot of small companies generating small quantities of lots of different kinds of

waste. And to emphasize that, but before I do that, the cost of using the alternative technology mentioned in the report does not adequately reflect the cost to our industry. Most of the cost for small hazardous waste generators would be from handling, segregating, packaging and shipping of these wastes, not from the large scale treatment and technologies that are listed in the back of the report.

Let me illustrate by an example of a typical small electronics company. This company manufacturers an electronic measurement instrument. So all the moving parts in this instrument are machined from brass stock or aluminum stock and then they are electroplated in a small plating shop. The sheet metal instrument case is sheared from sheet aluminum and painted in a paint booth - excuse me, it's cleaned first, precleaned and then painted in a paint booth. The circuits for this company's products are designed in a small, solid state research facility and manufactured for them by a larger semiconductor company.

Now I list in this paper, the following wastes were generated in a 60-day period: 20 gallons of waste cutting oils which have a high sulfur content, 10 gallons of waste solvent used to remove the cutting oil from the machine and parts, 30 gallons of waste alkaline cleaner used to clean brass parts prior to plating, 60 gallons of waste chromium acid solution used to prepare brass for plating, 30 gallons of waste phosphoric acid aluminum cleaner, five gallons of spent electroless nickel, 50 gallons of chlorinated degreasing

solvent and sludge, and I won't read all of these in the interest of time, but I'll point out a couple of interesting ones here. There's 50 gallons of paint sludge from this water curtain booth that contains a mixed solvent base paint and water base paint and that's because we've seen this company that's forced to partial shift to water base paint that has been mandated by the state in local air pollution regulations. There's some other things here. There's a gallon of waste photo resist stripper. There's five gallons of offspec paint and there's one pint of waste silicon tetrachloride and 600 gallons of waste heavy metal sludge from a small waste treatment system and others and others and I missed some, I'm sure.

Now let's look at how we're handling those things. Since this typical company wishes not to be subjected to a list of California regulations for "treatment, storage, and disposal facilities," they must get rid of all these wastes and not store them more than 60 days. This means that these wastes cannot be accumulated up to a tank truck or even in a lot of cases, a 55-gallon drum. So these wastes are presently shipped in either 55-gallon drums that could be buried in landfill or treated by a waste contractor. Many of the smaller containers are packed in a larger drum with vermiculite in between each one of the smaller containers and these go to landfill.

With the exception of the chlorinated wastes that are in this list, there are currently no recyclers who are

interested in any of these wastes, especially in small quantities. The large costs of handling these small quantities make it economically prohibitive for recycling. Nearly all the solvents and oil contain either chlorinated solvent or high sulfur content and so they're not easily incinerated. You've heard some previous testimony about the problem with those solvents. The paint sludge is a thick gooey material that's very difficult to remove from the 55-gallon drum we have to ship it in because it's flammable and it's got water base and solid base paint sludge mixed together and the report points out that it can't be incinerated anyway so...

CHAIRWOMAN TANNER: That's a problem.

MR. AFFLECK: Yes, we've got heavy metal sludges that are in this waste treatment system and now the waste contractor hauls that to a Class I dumpsite. Now the economics are not there or would have to make a radical shift in order to make this -- to possibly recover the reclamation costs of these metals. Who will pay the difference between the cost of reclaiming and the price of new metal? Solidification of these heavy metal sludges which is proposed in the report is an added expense that would fall heavily on the electronics companies.

CHAIRWOMAN TANNER: Could I ask you a question?

MR. AFFLECK: Yes.

CHAIRWOMAN TANNER: Could it be a pooling.....?

MR. AFFLECK: Okay, I can get into that here. Yes, it could be a pooling but that requires a new industry to be

formed to do that, some kind of a middleman, and I think that's a very good point. Yes, it could happen, but how is that going to happen? The report is all for solidification of these sludges and we see no evidence in the report to show us that that expense is necessary to protect the environment.

CHAIRWOMAN TANNER: Mr. Katz has a question.

ASSEMBLYMAN KATZ: I don't have a question. I'd like to actually direct it to OAT because this is the point I was raising before and I would be curious to hear your response to what this gentleman is saying.

MR. STODDARD: This has been one of the most valuable witnesses I think we've heard today. He's been very specific about some of the problems that face his industry and we would like to work with his association tomorrow to see if we can't come to some kind of resolution on this. I mean these are serious concerns we want to address.

ASSEMBLYMAN KATZ: But this is an example of people who, as we were discussing earlier, may not be able to comply with what you're trying to do in the OAT report immediately.

MR. STODDARD: I agree and with the quantities we're talking about here, I can see no reason why we can't start to consider some small quantity exemptions and provide a lot more time until we have industry that can deal with these kinds of wastes in a cost effective manner. This is not the large volumes of highly toxic waste that we're most concerned with and we don't want to create hardships for this type of industry.

MR. AFFLECK: I'm glad to hear that because we are very concerned that these 1,100 companies trying to combine these things and to do all that. There aren't companies in business now and I'm not sure that they could even if they were in business make any money doing that kind of thing and so we're very concerned about something that's trying to force technology through regulation. We think that to unleash a wave of new, expensive, unjustified hazardous waste regulations before the recent comprehensive federal promulgated program that's still in place is an untimely overkill. Our industry is very sensitive to the added costs that make it more difficult to compete with our foreign competitors, especially Japan. Without extremely high cost to our industry, we see no way that treatment facilities can be sited and built, recycling businesses can be developed, and the proposed phase out of landfill implemented in this scheduled time frame. We think the regulations based on the OAT report are premature, that California should implement the federally mandated RCRA regulations before adding more regulations, and that a closer look should be taken at implementation problems for the alternatives to landfill.

CHAIRWOMAN TANNER: Thank you very much. I would really think that you did point out some serious problems and I'm glad that you intend to work with them and address that problem. We have one final witness and then after Mr. Cupps testifies, I think that we should...

UNIDENTIFIED VOICE: Recess for dinner, right.

CHAIRWOMAN TANNER: John Cupps is representing the California Council for Environmental and Economic Balance. Would you identify yourself, Mr. Cupps.

MR. JOHN CUPPS: I'm John Cupps representing the California Council for Environmental and Economic Balance. I have a very brief prepared statement that in recognition of the very late hour and patience of the Committee, I will even summarize that.

CHAIRWOMAN TANNER: Thank you.

MR. CUPPS: Basically, members of our Council really do not have any fundamental disagreement with the goal of reducing the use of dependence on landfill through the use of alternative technologies. We do, however, strongly disagree with the approach that the administration has taken to accomplish that goal. At the very least, the proposed hearing on land disposal of high priority waste is premature until such time that the issue of hazardous waste facility siting has been addressed and resolved.

Earlier today we heard assurances that they are in the process of streamlining the permit process and that this is going to make it possible to site facilities. Frankly, we're very skeptical of that. Six years ago legislation was enacted, the bill number was AB 884 by Assemblyman and then Speaker, Leo McCarthy, to streamline the permit process. Frankly, that effort to streamline the permit process has simply not worked. Two years ago the Department of Health Services and Water Resources Control Board, and I believe also

the Solid Waste Management Board, signed a Memorandum of Understanding committing themselves to develop a consolidated permit process for hazardous waste facilities. I think you can appreciate why we're a little bit skeptical when we hear these assurances that the permit process is going to be streamlined by the Administration.

You, Madame Chairwoman, have set in motion through AB 1543 a process that hopefully will be implementing hazardous waste management facility siting. I can tell we have an answer to that problem. I think it's premature to proceed with the proposed ban on landfilled disposal.

CHAIRWOMAN TANNER: Are there any questions? Thank you, John. Thank you very much. There were a number of other people who would like to testify. I just feel that we have reached the point where it's very difficult to even hear anymore testimony. Mr. Konnyu would like to make a comment.

ASSEMBLYMAN KONNYU: Madame Chairwoman, as a newcomer to the Legislature, I just want to say that this is one of the best experiences for me. I think that the OAT report is leading us in the right direction. I think there are some issues with respect to timing and with respect to specificity.

ASSEMBLYWOMAN WRIGHT: Say it again.

ASSEMBLYMAN KONNYU: Specificity, Madame, and if we solve those two things, okay to use John Vasconcellos' words, in a caring way, understanding economics and the realities, then I think we're going in a right direction. That's just it, you know. Let's just recognize that our Chairwoman is leading

us in the right direction and I applaud you.

CHAIRWOMAN TANNER: Thank you. Mr. Katz has something.

ASSEMBLYMAN KATZ: Certainly, and I concur with what Ernie said, which is not nearly as strange as him quoting John Vasconcellos, but I would like to mention one thing though concerning the OAT report and, as was pointed out, even though we had certain assurances about it in the beginning, that it was being dealt with through one way or another, it was brought out by the gentleman from the electronics industry that there tends to be in government the belief that if you promulgate regulations, you do it across the board, that there's not the sensitivity to small businesses in particular or medium-sized businesses when those regulations are put forth. All right. It so happens I have a bill that deals with that, but we can address that later. I think it's important, I mean I think the OAT people are more aware of it now. I think it's important that all government agencies, be it in the toxic field or anything else, recognize the fact that regulations affect different sized businesses differently and what's economically feasible for the Dow Chemical Company to do in their kind of recycling efforts or resource recovery efforts, may not be economically feasible and therefore not practical for the small businesses nor the moderate sized businessperson.

CHAIRWOMAN TANNER: Thank you. Dave.

ASSEMBLYMAN ELDER: I think in terms of what we've

talked about here, the siting operation I think has to move ahead, but I think there are many appropriate sites despite the testimony from the gentleman from Washington, D.C. It is not possible that we really have been mislead by the Water Resources Control Board as to the permeability factors and I don't see that anybody is reacting to that but we have started going out as fast as possible to get a certain number of sites, remote sites, developed so we have an alternative.

Now I'm not sure if this OAT study is an alternative analysis or a needs assessment. I don't know. Maybe it's a combination of the two but I think it's not so much a report that advocates and it seems to be that this report advocates so I guess it really isn't an alternative analysis and yet it's really not a needs assessment because it doesn't have the background of all the data that was really established. I guess it's kind of somewhere between the two of them but, in terms of throwing the whole thing back in the lap of industry, we may frankly not have any other choice because the revenues are not being generated to take care of government services that we're always talking about and one of the things that seems to be being done in the new federalism is the shifting back to a lower level of government. Well, another way to do it is to possibly shift things out to the private sector in terms of the costs and take some of the heat off the general purpose fund. We may not have any choice. The budget situation is very critical and that may be where we ultimately have to go.

CHAIRWOMAN TANNER: Thank you.

ASSEMBLYWOMAN WRIGHT: I'm very pleased with today's hearing. I was sort of apprehensive that we weren't going to hear it when we had to go into session last week. I'm thrilled that we did go through this process and I look upon the OAT report as I did in the very beginning -- as a discussion paper, and that's what came through. There are points in here that are very unusual and I think time and time again, I think what we have to look at is two processes, and one is definitely streamlining the permit process and holding ourselves to it and then working to better administrate and not an adversary position.

CHAIRWOMAN TANNER: And do you want to do up... Just a very short... Mr. Stoddard.

MR. STODDARD: I've got to stand up. I've got to do that. This has been a very, very helpful hearing to us. It's been important for us to hear these kinds of industry comments. There have been a lot of industry officials that have come forward when our report came out and others who have held back and I think we're very aware of the skeptical, paranoid, select your own adjective, about what we're really up to.

I want to reemphasize we're not trying to ban land disposal in California. We continue to say it's an acceptable method of disposal for many hazardous wastes. We have not had a major failure yet in California at one of our Class I landfills. That should not lead us into complacency in looking for better alternatives. We know it represents the greatest

risk. We don't know in 50 or 100 years from now someone will be living with the products of our bad regulation by not trying to mandate technologies. I think that we heard that a lot today, too. We're simply saying that the land disposal option for some hazardous wastes should not be available but we know there are better ways to do it and leave it to industry to determine which of those makes sense for them. We don't purport to be so expert that we could tell Dow or a small plater or really anyone the best technology for them to use. They know their waste stream better than we do. What we're trying to do is get a program started but I think it's incredibly important for this state. We are one of the major waste producing states in the country. We are using landfill capacity and at some point we've got to bite the bullet and use new facilities. Now the question is, what kind of facilities are those going to be? Are they going to be new landfills and, if they are, can we even get them or are we going to make a commitment to the use of better alternative waste management technologies.

It's real unfortunate the the Executive Order or that the press release, whichever it was, created all this controversy because I don't think it's well founded. It was not intended to perpetrate this kind of controversy. We went to great lengths to try to involve industry. We weren't sure where this thing was going. We worked on it for about a year and every month the situation in California changed a little bit. We ended up with a report that I think made a lot of

sense for California as a first step. The Governor decided to take the second step and begin to try to implement those recommendations. He did not ban land disposal. He said what we need to do is commit to a program with a phasing out of those materials that represent the greatest risk and it has to be done through our regulatory process, one that has to involve industry and to be sensitive to the economic considerations. We've tried to do that. Hopefully, we can turn the skepticism that exists today into cooperation and rather than get bogged down in those studies, we can take some important steps forward and bring us closer to reality with the time that we have left.

CHAIRWOMAN TANNER: Thank you very much.

MR. STODDARD: Thank you.

CHAIRWOMAN TANNER: There is some additional testimony that is submitted to us, written testimony that will be put in the record of the hearing. I would hope we discussed permitting at length. I would hope also that in your report you came up with the most hazardous materials that we would have to deal with. I would hope that you or the Department of Health Services would review those wastes that are not necessarily hazardous but have been referred to a number of times here and that waste must go into the Class I landfill and, if there are wastes that should not be in that list, I would certainly hope that you would take time to review that.

MR. STODDARD: That's a good suggestion. That will be one of our recommendations. One thing I didn't mention

was Senate Bill 810, which is a major frustration for us. It is a key piece of our program and one that we felt was real critical in providing the right financial climate for small industries in particular in making investments, and today we heard that we have a program that needs legislation and how can we proceed with our data. Well, at the same time, we have some industry opposition to it, a real critical piece of the program, and I would certainly make a plea to industry today to reevaluate the position to 810. I think we made it clear that we're not pushing too hard and fast, that there is a reasonable approach to try and improve our waste management program in California. That bill is a very important piece of it and I would hope that we could get it out.

CHAIRWOMAN TANNER: Thank you very much and you will be working with Mr. Affleck:

MR. STODDARD: We certainly will.

CHAIRWOMAN TANNER: Thank you very much ladies and gentlemen. I think it was a good hearing.